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NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION  
PATUXENT RIVER, MARYLAND



## TECHNICAL MEMORANDUM

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**1995 U.S. NAVY/MARINE CORPS  
MATCHED MALE AND FEMALE ANTHROPOMETRIC ELIGIBLE  
PILOT DATABASES**

4 June 1997

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DEPARTMENT OF THE NAVY  
NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION  
PATUXENT RIVER, MARYLAND

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13. ABSTRACT ( <i>Maximum 200 words</i> ) This report presents a derived database describing the anthropometry of a potential future United States Naval/Marine Corps (hereafter referred to as "Naval") aviation population. The creation of this database was in response to a Congressional mandate to expand present design specifications to ensure that future military equipment will fit a larger proportion of the United States population. By accommodating more people, occupational choices will not be substantially limited by fit and accommodation issues. Anthropometric databases containing extensive body size and shape information are critical for the proper design and sizing of military clothing, equipment, and workstations. The last anthropometric survey of Naval aviators was conducted in 1964 on men only. No valid anthropometric data has been collected on female aviators. Statistical matching procedures were used to create an updated Naval aviation anthropometric database of 70 dimensions for males and females from the 1988 ANSUR. The summary statistics and descriptions of the 70 selected dimensions are presented along with correlations, regression equations, and bivariate frequency tables. This database should be used with the caution that because it represents a <i>future</i> population, it cannot be known how well it will represent that population. Future changes in immigration trends, military induction policy, and other variables may affect representivity. Nonetheless, this database represents a scientific, rational approach toward complying with the Congressional mandate.				
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**United States Navy**  
**Naval Air Warfare Center**

**1995 US Navy/Marine Corps Matched Male and  
Female Anthropometric Eligible Pilot  
Databases**

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## PREFACE

This report presents a derived database describing the anthropometry of a potential future United States Naval/Marine Corps (hereafter referred to as "Naval") aviation population. The creation of this database was in response to a Congressional mandate to expand present design specifications to ensure that future military equipment will fit a larger proportion of the United States population. By accommodating more people, occupational choices will not be substantially limited by fit and accommodation issues.

Anthropometric databases containing extensive body size and shape information are critical for the proper design and sizing of military clothing, equipment, and workstations. The last anthropometric survey of Naval aviators was conducted in 1964 on men only. No valid anthropometric data has been collected on female aviators. Statistical matching procedures were used to create an updated Naval aviation anthropometric database of 70 dimensions for males and females from the 1988 Anthropometric Survey of US Army Personnel (ANSUR). The summary statistics and descriptions of the 70 selected dimensions are presented along with correlations, regression equations, and bivariate frequency tables.

This database should be used with the caution that because it represents a *future* population, it cannot be known how well it will represent that population. Future changes in immigration trends, military induction policy, and other variables may affect representivity. Nonetheless, this database represents a scientific, rational approach toward complying with the Congressional mandate.

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# **1995 US NAVY/MARINE CORPS MATCHED MALE AND FEMALE ANTHROPOMETRIC ELIGIBLE PILOT DATABASES**

## **CHAPTER I**

### **ELIGIBLE PILOT DATABASES**

#### **INTRODUCTION**

All US Military and many foreign services compile and maintain extensive collections of body size information used primarily to guide the design and sizing of clothing, personal protective equipment, work stations, and computer-generated human models. In order to be effective, such a database must be updated periodically to accurately reflect the body sizes and proportions of the military population it purports to represent.

The US Navy requested that statistically matched male and female eligible pilot databases be created for use in the design of clothing, individual equipment, and workstations for future Navy/Marine Corps (MC) flying populations. The creation of a database representing a potential future population has been necessitated by Congressional orders that mandate the expansion of present design specifications so that future military equipment will fit a larger proportion of the United States population, thereby increasing an individual's choice of military occupations. If equipment is not designed in this manner, capable soldiers may not be able to choose a specific occupation simply because the cockpit, workstation, or protective clothing do not fit properly. Implementation of the Congressional mandate will allow under-represented groups to fully participate in military service.

#### **DATABASE MATCHING**

To successfully create a statistically matched anthropometric database, the demographic distribution of the target population must first be determined. Age and race are the primary demographic variables to be controlled since together they explain a large proportion of the anthropometric variation present in a given population<sup>1,2,3</sup>. Before statistically matched databases could be created, the most likely age and race profile of the eligible pilot population had to be determined. In addition, certain requirements integral to the pilot mission, such

Table 1. June 1994 Navy/MC Male Pilot Population

Age	White	Black	Hispanic	Am Indian	Asian	Totals
23-25	820 4.70%	12 0.10%	23 0.10%	5 0.00%	20 0.10%	880 5.00%
26-30	6004 34.30%	164 0.90%	198 1.10%	33 0.20%	101 0.60%	6500 37.10%
31-35	4106 23.40%	105 0.60%	124 0.70%	20 0.10%	66 0.40%	4421 25.20%
≥ 36	5515 31.50%	74 0.40%	77 0.40%	17 0.10%	37 0.20%	5720 32.60%
Totals	16445 93.90%	355 2.00%	422 2.40%	75 0.40%	224 1.30%	17521 100%

Table 2. June 1994 Navy/MC Female Pilot Population

Age	White	Black	Hispanic	Am Indian	Asian	Totals
23-25	36 13.80%	1 0.40%	1 0.40%	0 0.00%	0 0.00%	38 14.60%
26-30	123 47.10%	5 1.90%	4 1.50%	0 0.00%	2 0.80%	134 51.30%
31-35	56 21.50%	0 0.00%	1 0.40%	1 0.40%	0 0.00%	58 22.20%
≥ 36	30 11.50%	0 0.00%	1 0.40%	0 0.00%	0 0.00%	31 11.90%
Totals	245 93.90%	6 2.30%	7 2.70%	1 0.40%	2 0.80%	261 100%

as educational level, must be considered when identifying the eligible pilot population in the US. Therefore, educational attainment must also play a significant role in a database designed to represent this population.

Based upon the premise that a student pilot must have a college degree, it is implied that a college graduate is also a potential pilot. Therefore, Department of Education (DOE) data describing the frequency of Bachelor's degrees conferred in the United States by racial group were chosen as a model for the racial distribution of a potential pilot population (see Tables 3 and 4). The DOE data are more appropriate than census data, such as the Educational Attainment Survey, because census data are self-reported, thus inviting error associated with memory recall. In addition, census data account only for some fraction of the population, thereby not providing a true account of the racial distribution of all college graduates. Census data may also be fraught with other types of error<sup>4</sup>.

The DOE demographic data for Bachelor's degrees conferred by institutions of higher education during the years 1989-1990, 1990-1991, 1991-1992 provided the basis for estimating the racial distribution of the eligible pilot population. These were the most recent data available at the time of the study. Male and female data were addressed separately, and non-resident aliens were not included since they cannot serve in the US military. For use in the statistical matching process, a three year average was computed from these data for all five racial groups (White, non-Hispanic; Black, non-Hispanic; Hispanic; Asian/Pacific Islander; and American Indian/Alaskan Native) for both males and females (Tables 3 and 4). Taking an average of the conferral rates is preferred over using the rates from an individual year because averaging stabilizes the contribution of smaller minority groups and provides the most statistically conservative approach<sup>5</sup>.

Table 3. Male Department of Education Race Distribution of Bachelor's Degrees Conferred				
	1989 - 1990	1990 - 1991	1991 - 1992	Three Year Average
<b>White</b>	87.74%	86.82%	85.93%	<b>86.83%</b>
<b>Black</b>	4.93%	5.08%	5.39%	<b>5.14%</b>
<b>Hispanic</b>	3.17%	3.38%	3.59%	<b>3.38%</b>
<b>Asian</b>	4.18%	4.32%	4.65%	<b>4.38%</b>
<b>Am Indian</b>	0.39%	0.40%	0.44%	<b>0.41%</b>

**Table 4. Female Department of Education Race Distribution of Bachelor's Degrees Conferred**

	<b>1989 - 1990</b>	<b>1990 - 1991</b>	<b>1991 - 1992</b>	<b>Three Year Average</b>
<b>White</b>	85.82%	85.18%	84.27%	<b>85.09%</b>
<b>Black</b>	6.89%	7.15%	7.54%	<b>7.19%</b>
<b>Hispanic</b>	3.26%	3.57%	3.79%	<b>3.54%</b>
<b>Asian</b>	3.56%	3.65%	3.90%	<b>3.70%</b>
<b>Am Indian</b>	0.46%	0.46%	0.50%	<b>0.47%</b>

The demographic profile of the Navy/MC combined pilot population, as defined by Defense Manpower Data Center (DMDC) for June of 1994, was used as a basis for the age distribution of the matched databases. The present Navy/MC pilot age profile was selected as a stable indicator of the age distribution normally seen in the Navy/MC flying population. This distribution is a result of requiring prospective student pilots to be college graduates, as well as promotion and retention practices within the Navy (see Tables 1 and 2). Since loglinear modeling did not indicate a statistically significant difference in the race-specific age distributions, the overall age distribution was applied to each of the race categories. The three year averaged DOE race distribution was combined with the overall Navy/MC pilot age distribution to create a demographic age/race matrix from which to derive the Navy matched database (see Tables 5 and 6).

Because of recent trends to design protective clothing and equipment for tri-service use, loglinear modeling was used to compare the Navy/MC and Air Force age distributions for both male and female flying personnel (see Figures 1 and 2). Significant differences were present for the males, but not the females. The Air Force male age distribution is slightly older than that of the Navy/MC males. Since the Navy requested the database and funded the necessary research, the Navy/MC age distribution was utilized in the matching process. Considering that age is a significant component of anthropometric variation, the derived male database, in particular, should not be used to design clothing, equipment, or workstations for any eligible pilot population other than the Navy/MC without very careful consideration.

The eligible subjects were randomly selected from the male and female 1988 Anthropometric Survey of US Army Personnel (ANSUR) data pool if they were 23 years of age or older, and belonged to one of five racial groups (White, Black, Hispanic, Asian/Pacific Islander, and American Indian/Native Alaskan). The total number of eligible males was 2,935 and the number of eligible females was 2,102. The data pool was *not* truncated on the current anthropometric standards for entrance into flight school as the goal of the database is to ensure

**Table 5. Estimated Demographics for Male Eligible Pilot Population**

Age	White	Black	Hispanic	Am Indian	Asian	Totals
23-25	4.34%	0.26%	0.17%	0.02%	0.22%	5.01%
26-30	32.21%	1.91%	1.25%	0.15%	1.62%	37.14%
31-35	21.88%	1.30%	0.85%	0.10%	1.10%	25.23%
≥ 36	28.38%	1.68%	1.10%	0.13%	1.43%	32.72%
<b>Totals</b>	<b>86.83%</b>	<b>5.14%</b>	<b>3.38%</b>	<b>0.41%</b>	<b>4.38%</b>	<b>100%</b>

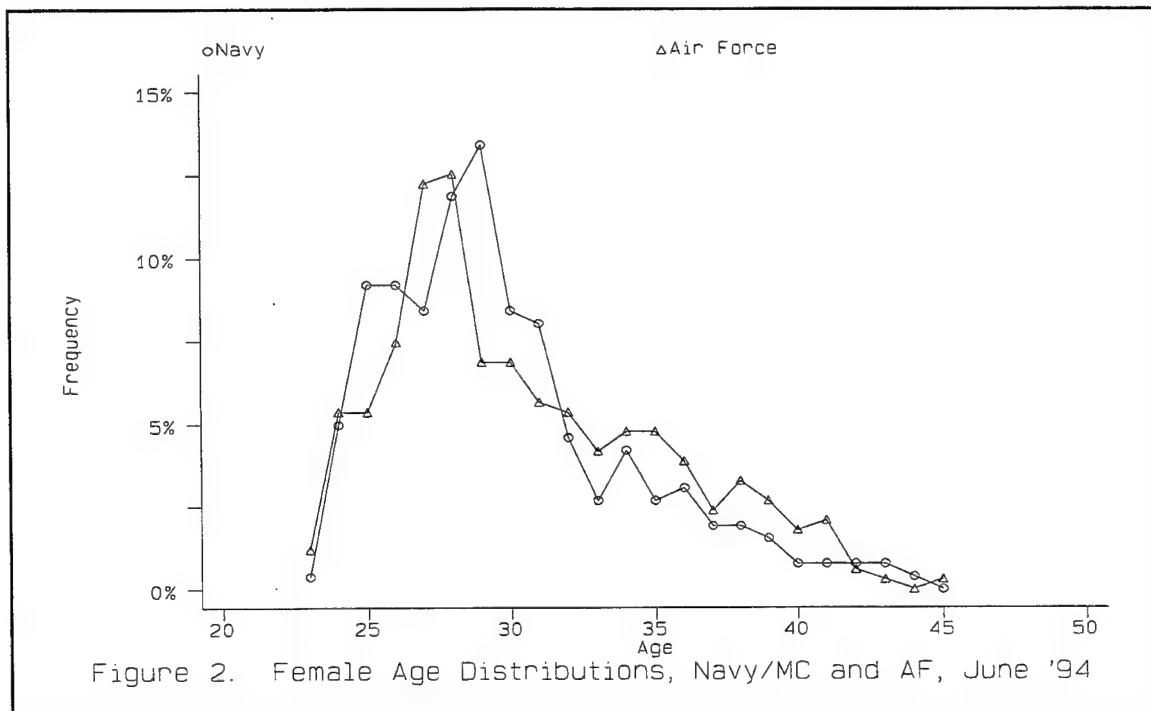
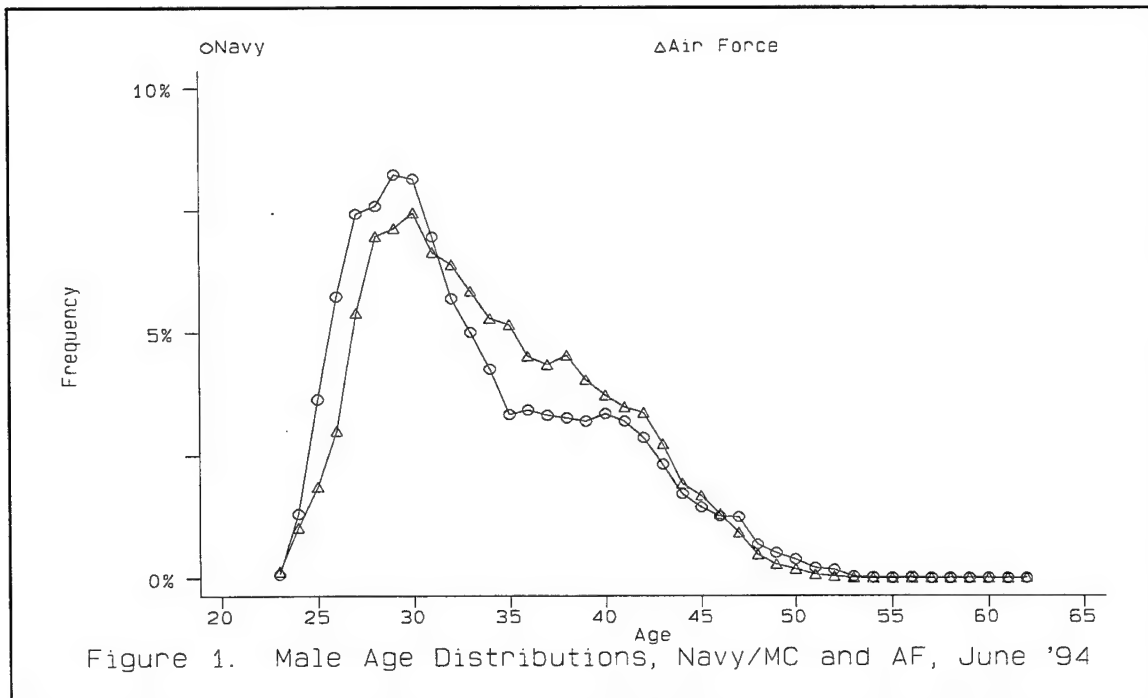
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**Table 6. Estimated Demographics for Female Eligible Pilot Population**

Age	White	Black	Hispanic	Am Indian	Asian	Totals
23-25	12.68%	1.07%	0.53%	0.07%	0.55%	14.90%
26-30	43.48%	3.67%	1.81%	0.24%	1.89%	51.09%
31-35	18.80%	1.59%	0.78%	0.10%	0.82%	22.09%
≥ 36	10.04%	0.85%	0.42%	0.06%	0.44%	11.81%
<b>Totals</b>	<b>85.09%</b>	<b>7.19%</b>	<b>3.54%</b>	<b>0.47%</b>	<b>3.70%</b>	<b>100%</b>

Discrepancies due to errors in rounding.





that future crew stations are designed to accommodate 80% of all US females and 95% of all US males who meet the age and educational criteria for entrance into flight school.

Stratified random selection was employed to create a demographically matched anthropometric database that emulates the race distribution of current eligible pilots, as estimated by the DOE data, and the present US Navy/MC pilot age distribution (see Tables 7 and 8). A total of four male (n=738) and four female (n=582) matched databases were created and the most central database for Stature and Weight was selected (Tables 9 and 10). Match 1 was selected for both males and females.

The databases were delivered to the US Navy on magnetic media and contain all 132 anthropometric dimensions measured during ANSUR. For a detailed discussion of ANSUR and information on all of the measured dimensions, please refer to the 1988 Anthropometric Survey of US Army Personnel: Methods and Summary Statistics<sup>6</sup>. A carefully chosen selection of 70 dimensions from the US Navy/MC eligible pilot databases are summarized in this report. Chapter II begins with a complete description of all anthropometric landmarks used as reference points to measure the 70 summarized dimensions. The summary statistics and descriptions of the dimensions follow. The next chapter contains correlations, while Chapter IV presents bivariate tables for pairs of dimensions frequently used as key dimensions. The final chapter contains regression equations that can be used to predict critical design values from a specified pair of key dimensions.

Table 7. Demographic Distribution of Male Matched Database

Age	White	Black	Hispanic	Am Indian	Asian	Totals
23-25	32 4.30%	2 0.30%	1 0.10%	0 0.00%	2 0.30%	37 5.00%
26-30	237 32.10%	14 1.90%	9 1.20%	1 0.10%	12 3.30%	273 37.10%
31-35	161 21.80%	10 1.40%	6 0.80%	1 0.10%	8 1.10%	186 22.30%
≥ 36	209 28.30%	13 1.80%	8 1.10%	1 0.10%	11 1.50%	242 32.60%
Totals	639 86.60%	39 5.30%	24 3.30%	3 0.40%	33 4.50%	738 100.00%

Discrepancies due to errors in rounding.

Table 8. Demographic Distribution of Female Matched Database

Age	White	Black	Hispanic	Am Indian	Asian	Totals
23-25	74 12.71%	6 1.03%	3 0.51%	12 2.06%	3 0.51%	86 14.78%
26-30	253 43.47%	21 3.61%	11 1.89%	2 0.34%	11 1.89%	302 51.89%
31-35	110 18.90%	9 1.55%	5 0.86%	1 0.17%	5 0.86%	130 22.34%
≥ 36	58 9.96%	5 0.86%	2 0.34%	4 0.68%	3 0.51%	68 11.68%
Totals	495 85.05%	41 7.04%	21 3.61%	3 0.52%	22 3.78%	582 100.00%

Discrepancies due to errors in rounding.

**Table 9. Stature and Weight Summary Statistics of the Male Matched Databases**

	Mean	St Dev	Minimum	Maximum	Total N
Match 1*					
Stature	1760.71	68.66	1497	1955	738
Weight	625.69	115.30	529	1169	738
Match 2					
Stature	1760.00	67.42	1526	1954	738
Weight	803.71	113.61	534	1169	738
Match 3					
Stature	1762.66	68.35	1497	1954	738
Weight	807.34	115.85	545	1214	738
Match 4					
Stature	1760.53	67.70	1497	1954	738
Weight	803.42	115.20	529	1169	738

\*Match 1 was chosen as the US Navy/MC Male Eligible Pilot Database

**Table 10. Stature and Weight Summary Statistics of the Female Matched Databases**

	Mean	St Dev	Minimum	Maximum	Total N
Match 1*					
Stature	1632.84	68.60	1428	1870	582
Weight	625.69	87.92	389	967	582
Match 2					
Stature	1632.83	64.59	1428	1870	582
Weight	623.59	90.32	389	923	582
Match 3					
Stature	1632.22	66.28	1428	1870	582
Weight	625.63	90.62	389	957	582
Match 4					
Stature	1635.84	65.84	1428	1836	582
Weight	627.13	87.83	389	967	582

\*Match 1 was chosen as the US Navy/MC Female Eligible Pilot Database

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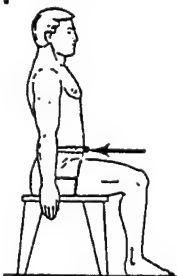
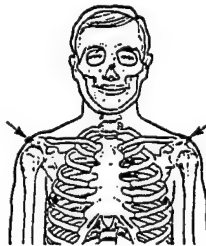
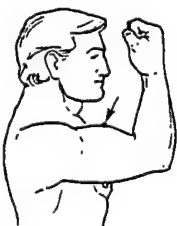
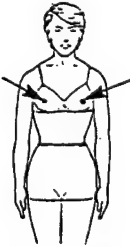
## CHAPTER II

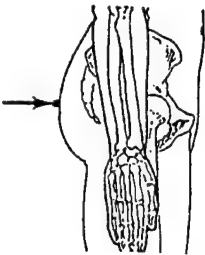
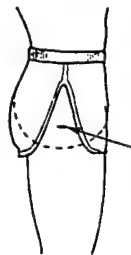
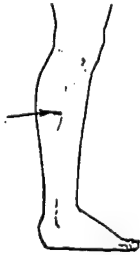


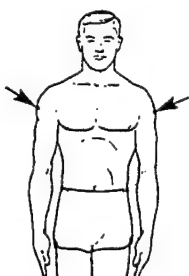
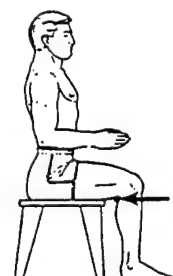

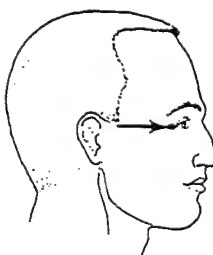

### SUMMARY STATISTICS

#### THE LANDMARKS

Dimensions are measured from one point on the body (or a fixed surface such as the floor) to another or, in the case of circumferences, around a part of the body at a specified level. To ensure that each dimension is measured accurately and consistently from subject to subject, dimensions are defined in terms of body landmarks, which serve as the origin, termination, or level of measurement of a dimension.

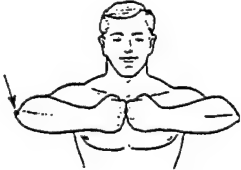
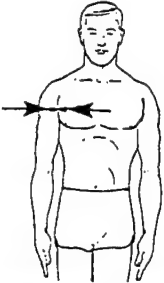
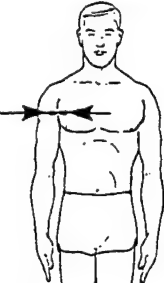
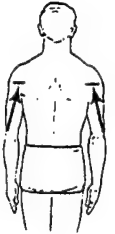
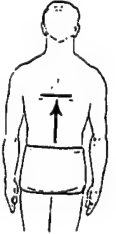
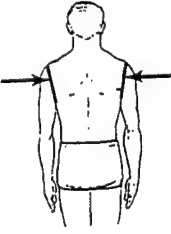

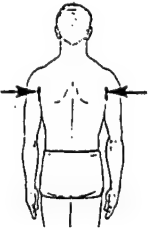
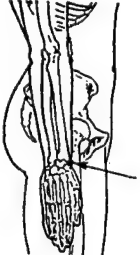

The landmarks used to define the measurements summarized in this report are listed and briefly described on the following pages. Detailed illustrated instructions for locating these landmarks can be found in the Measurer's Handbook: US Army Anthropometric Survey 1987-1988.<sup>7</sup>

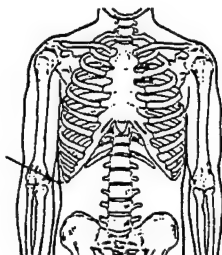
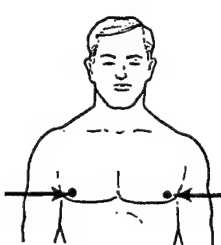

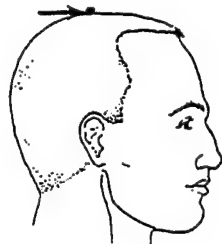
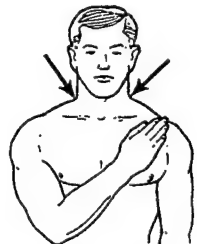
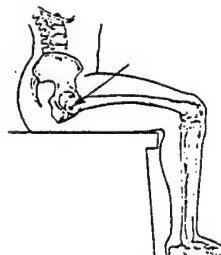
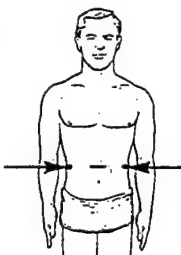
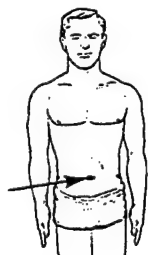
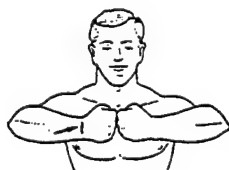
Landmark Definitions and Illustrations	
<p><b>Abdominal point, anterior:</b> The most protruding point of the relaxed abdomen of a seated subject.</p> 	<p><b>Acromion, right and left:</b> The point of intersection of the lateral border of the acromial process and a line running down the middle of the shoulder from the neck to the tip of the shoulder.</p> 
<p><b>Biceps point:</b> The highest point of the right flexed biceps as viewed from the subject's right side.</p> 	<p><b>Bustpoint, right and left:</b> The anterior points of the bra cups.</p> 

<p><b>Buttock point, posterior:</b> Point of maximum protrusion of the right buttock of a standing subject.</p> 	<p><b>Buttock point, lateral:</b> <b>right and left:</b> Points on the thigh or hip at the level of the maximum protrusion of the right buttock.</p> 
<p><b>Calf:</b> A point on the side of the calf at the level of the maximum circumference of the right calf.</p> 	<p><b>Cervicale:</b> The superior palpable point of the spine of the seventh cervical vertebra.</p> 
<p><b>Dactylion III, right and left:</b> The tip of the middle finger.</p> 	<p><b>Deltoid point, right and left:</b> The lateral point of the right deltoid muscle, and the margin of the left deltoid muscle at the level of the right deltoid point.</p> 
<p><b>Dorsal juncture of the calf and thigh:</b> The juncture between the right calf and thigh behind the knee of a subject sitting with the knee flexed 90 degrees.</p> 	<p><b>Dorsal juncture of the foot and leg:</b> The top of a skin crease between the right foot and the front of the ankle when the knees and ankles are flexed about 30 degrees.</p> 
<p><b>Ectocanthus:</b> The outside corner of the right eye formed by the meeting of the upper and lower eyelids.</p> 	<p><b>Elbow crease:</b> The skin crease on the inside of the right elbow joint when the elbow is flexed 90 degrees.</p> 

<p><b>Gluteal furrow point:</b> The lowest point of the lowest furrow or crease at the juncture of the right buttock and the thigh.</p> 	<p><b>Infrathyroid:</b> The inferior point in the midsagittal plane of the thyroid cartilage (Adam's apple).</p> 
<p><b>Inner thigh:</b> A vertical line halfway between the front and back of the right inner thigh, and extending downward from the level of the gluteal furrow.</p> 	<p><b>Knee point, anterior:</b> The most protruding point of the right kneecap of a seated subject.</p> 
<p><b>Lateral malleolus:</b> The lateral point of the right lateral malleolus (outside ankle bone).</p> 	<p><b>Midpatella:</b> The anterior point halfway between the top and bottom of the right patella (kneecap).</p> 
<p><b>Midshoulder:</b> The point on the top of the right shoulder midway between the neck (right trapezius point) and the tip of the shoulder (acromion, right).</p> 	<p><b>Midspine:</b> A line down the center of the back.</p> 
<p><b>Neck, anterior, right lateral and left lateral:</b> Anterior and lateral points at the base of the neck.</p> 	<p><b>Olecranon, bottom and rear:</b> The lowest and rearmost points of the right elbow with the elbow flexed 90 degrees.</p> 



<p><b>Olecranon, center:</b> A point on the center of the curvature of the right olecranon process with the elbow flexed about 115 degrees.</p> 	<p><b>Scye, anterior on torso:</b> A short horizontal line on the torso originating at the apex of the right anterior axillary fold.</p> 
<p><b>Scye, anterior on upper arm:</b> A short horizontal line on the upper arm originating at the apex of the right anterior axillary fold.</p> 	<p><b>Scye, midscye, right and left:</b> A short horizontal line bisecting the posterior diagonal scye landmark.</p> 
<p><b>Scye, midspine:</b> A short, horizontal line across the spine at the level of the posterior horizontal scye landmarks.</p> 	<p><b>Scye, posterior diagonal, right and left:</b> A diagonal line connecting the apex of the posterior axillary fold with the acromion landmark on the tip of the shoulder.</p> 
<p><b>Scye, posterior horizontal, right and left:</b> A short horizontal line on the back originating at the apex of the posterior axillary fold.</p> 	<p><b>Scye, posterior vertical, right and left:</b> A short vertical line originating at the apex of the posterior axillary fold.</p> 
<p><b>Stylian:</b> The lowest point of the bottom of the right radius.</p> 	<p><b>Suprapatella:</b> The superior point of the right patella (kneecap).</p> 

<p><b>Tenth rib:</b> The inferior point of the right tenth rib (bottom of the rib cage).</p> 	<p><b>Thelion, right and left:</b> Center of the nipples (on males).</p> 
<p><b>Thigh point, top:</b> The highest point of the top of the right thigh of a seated subject.</p> 	<p><b>Top of head:</b> The highest point on the head when the head is in the Frankfort plane.</p> 
<p><b>Trapezius point, right and left:</b> The point at which the anterior border of the trapezius muscle crosses the lateral neck landmark.</p> 	<p><b>Trochanter:</b> A point at the center of the lateral surface of the greater trochanter of the right femur of a sitting subject.</p> 
<p><b>Waist (natural indentation), right, left, anterior, and posterior:</b> Level of the greatest indentation on the right side of the torso, or half the distance between 10th rib and Iliocristale if no single indentation is clear.</p> 	<p><b>Waist (omphalion), right, left, anterior, and posterior:</b> Level of the center of the navel.</p> 
<p><b>Wrist, dorsal:</b> A line across the back of the right wrist originating at the stylium landmark and perpendicular to the long axis of the arm.</p> 	

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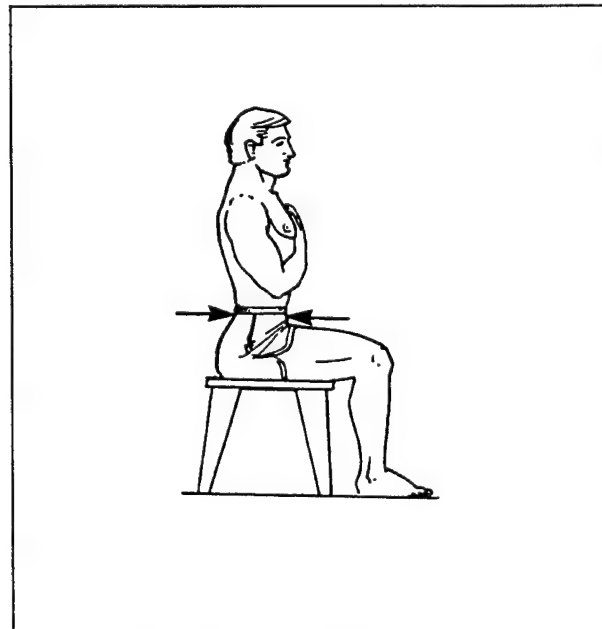
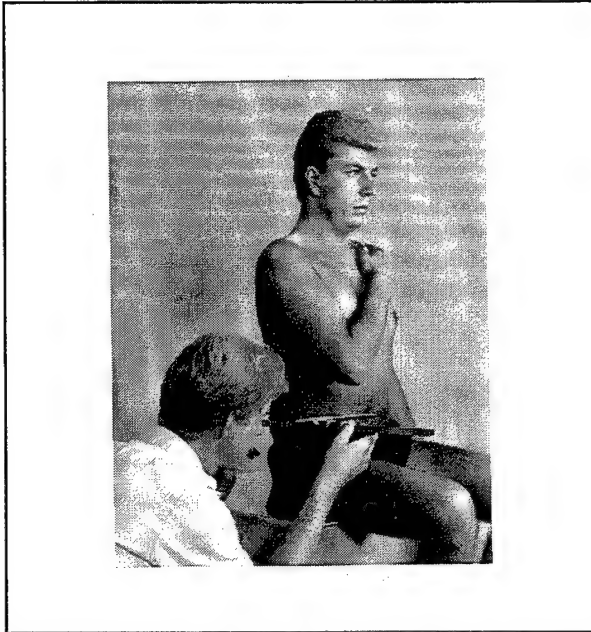
## THE SUMMARY STATISTICS

Summary statistics, including means, standard deviations, and percentile values for the male and female US Navy/MC Eligible Pilot Databases, are presented in the following pages. Each of the summarized dimensions is fully described and illustrated. All of the dimensions were directly measured using traditional instruments and standard anthropometric techniques. The measurements were taken on the right side of the subject unless otherwise specified or in the rare cases where an injury or anatomical abnormality made it necessary to measure on the left side. Measurements were made to the nearest millimeter, except Weight taken to the nearest 0.1 kilogram.

Detailed instructions for measuring these anthropometric dimensions can be found in the Measurer's Handbook: US Army Anthropometric Survey 1987-1988.<sup>7</sup> Information regarding the survey in general can be found in the 1988 Anthropometric Survey of US Army Personnel: Methods and Summary Statistics.<sup>6</sup>

### **(1) Abdominal Extension Depth, Sitting**

The horizontal distance between the anterior point of the abdomen and the back at the same level is measured with a beam caliper. The subject sits erect looking straight ahead. The measurement is made at the maximum point of quiet respiration.



**(1) Abdominal Extension Depth, Sitting**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
226.3	Mean	8.91
1.1	SE(Mean)	0.04
27.1	StDev	1.07
0.8	SE(StDev)	0.03
170.0	Minimum	6.69
312.0	Maximum	12.28
Coefficient of Variation		12.0%
Symmetry----Veta I		0.48
Kurtosis----Veta II		2.86
Sample Size		582

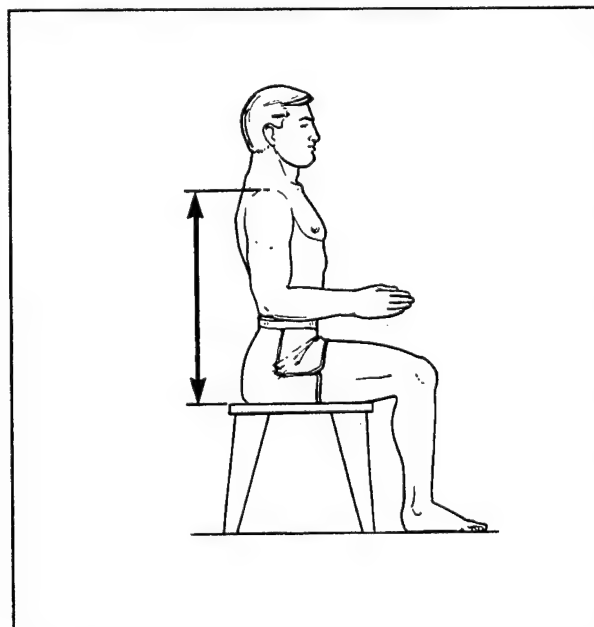
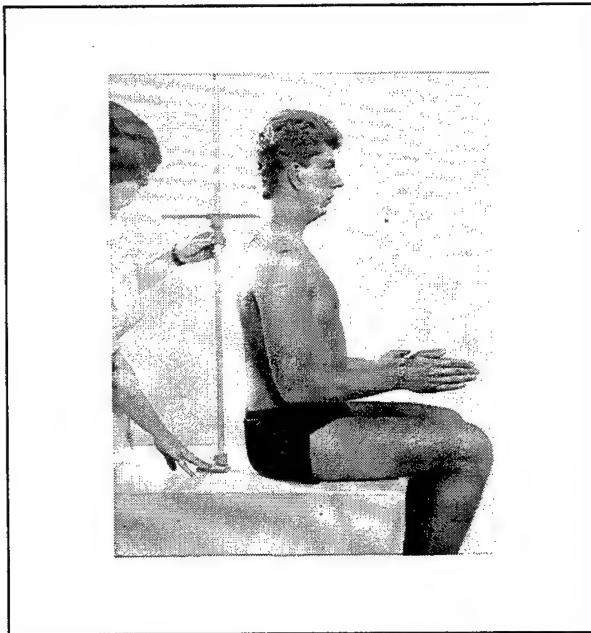
<b>Percentiles</b>		
Millimeters		Inches
175.9	1st	6.93
179.9	2nd	7.08
182.5	3rd	7.18
186.3	5th	7.33
192.8	10th	7.59
197.8	15th	7.79
202.0	20th	7.95
205.9	25th	8.11
209.5	30th	8.25
213.1	35th	8.39
216.5	40th	8.53
220.0	45th	8.66
223.6	50th	8.80
227.2	55th	8.95
231.0	60th	9.09
235.0	65th	9.25
239.3	70th	9.42
244.0	75th	9.61
249.4	80th	9.82
255.7	85th	10.06
263.6	90th	10.38
274.9	95th	10.82
281.9	97th	11.10
286.8	98th	11.29
293.6	99th	11.56

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
249.0	Mean	9.80
1.1	SE(Mean)	0.04
30.0	StDev	1.18
0.8	SE(StDev)	0.03
184.0	Minimum	7.24
350.0	Maximum	13.78
Coefficient of Variation		12.0%
Symmetry----Veta I		0.40
Kurtosis----Veta II		2.92
Sample Size		736

<b>Percentiles</b>		
Millimeters		Inches
191.6	1st	7.54
196.3	2nd	7.73
199.5	3rd	7.85
204.0	5th	8.03
211.8	10th	8.34
217.5	15th	8.56
222.4	20th	8.76
226.8	25th	8.93
231.0	30th	9.09
234.9	35th	9.25
238.8	40th	9.40
242.7	45th	9.55
246.6	50th	9.71
250.6	55th	9.87
254.7	60th	10.03
259.1	65th	10.20
263.7	70th	10.38
268.8	75th	10.58
274.6	80th	10.81
281.3	85th	11.07
289.7	90th	11.41
301.9	95th	11.88
309.3	97th	12.18
314.5	98th	12.38
322.0	99th	12.68

## (2) Acromial Height, Sitting

The vertical distance between a sitting surface and the acromion landmark on the tip of the right shoulder is measured with an anthropometer. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is made at the maximum point of quiet respiration.



**(2) Acromial Height, Sitting**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
565.3	Mean	22.25
1.1	SE(Mean)	0.04
26.2	StDev	1.03
0.8	SE(StDev)	0.03
490.0	Minimum	19.29
664.0	Maximum	26.14
Coefficient of Variation		4.6%
Symmetry----Veta		0.08
Kurtosis----Veta II		3.04
Sample Size		582

<b>Percentiles</b>		
Millimeters		Inches
502.5	1st	19.78
511.1	2nd	20.12
516.2	3rd	20.32
522.8	5th	20.58
532.5	10th	20.96
538.7	15th	21.21
543.6	20th	21.40
547.8	25th	21.57
551.5	30th	21.71
555.0	35th	21.85
558.3	40th	21.98
561.6	45th	22.11
564.8	50th	22.24
568.0	55th	22.36
571.4	60th	22.49
574.8	65th	22.63
578.5	70th	22.78
582.5	75th	22.93
587.0	80th	23.11
592.3	85th	23.32
599.0	90th	23.58
608.7	95th	23.97
614.9	97th	24.21
619.3	98th	24.38
625.9	99th	24.64

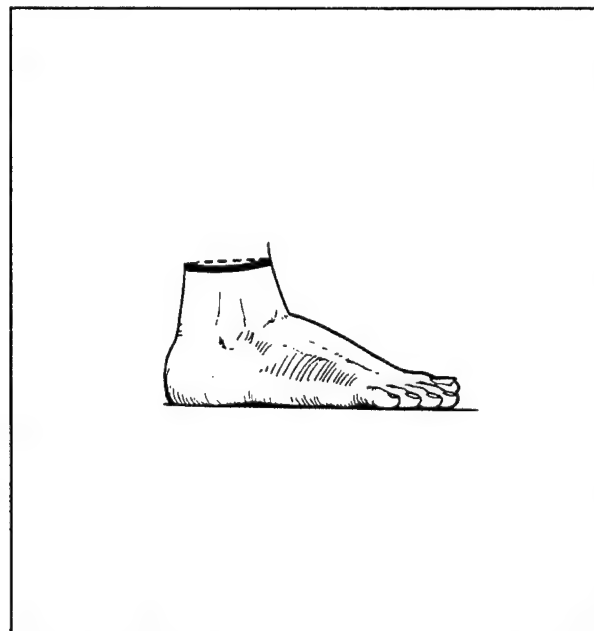
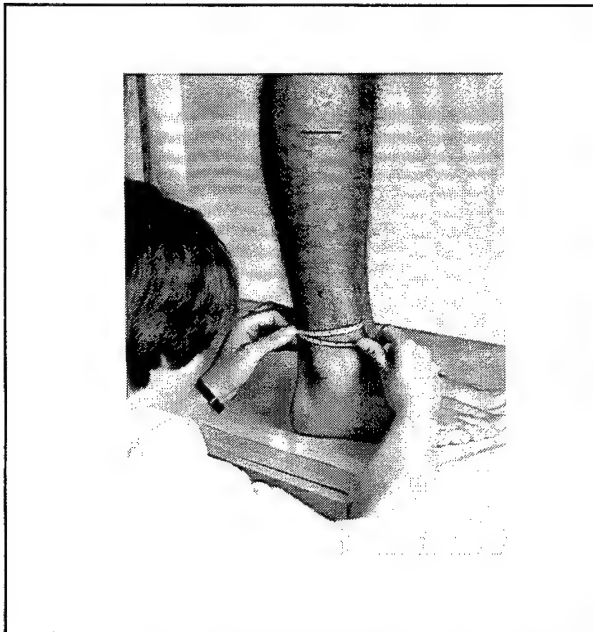
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
607.6	Mean	23.92
1.0	SE(Mean)	0.04
28.1	StDev	1.10
0.7	SE(StDev)	0.03
518.0	Minimum	20.39
701.0	Maximum	27.60
Coefficient of Variation		4.6%
Symmetry----Veta I		0.03
Kurtosis----Veta II		2.90
Sample Size		736

<b>Percentiles</b>		
Millimeters		Inches
545.3	1st	21.47
551.6	2nd	21.71
555.7	3rd	21.88
561.6	5th	22.11
571.1	10th	22.48
577.7	15th	22.75
583.1	20th	22.96
587.9	25th	23.14
592.2	30th	23.31
596.2	35th	23.47
600.0	40th	23.62
603.7	45th	23.77
607.4	50th	23.91
611.1	55th	24.06
614.8	60th	24.20
618.6	65th	24.36
622.7	70th	24.51
627.0	75th	24.69
631.8	80th	24.87
637.3	85th	25.09
644.0	90th	25.36
653.6	95th	25.73
659.5	97th	25.96
663.5	98th	26.12
669.6	99th	26.36



### (3) Ankle Circumference

The minimum horizontal circumference of the right ankle is measured with a tape. The subject stands with the feet about 10 cm apart and the weight distributed equally on both feet.



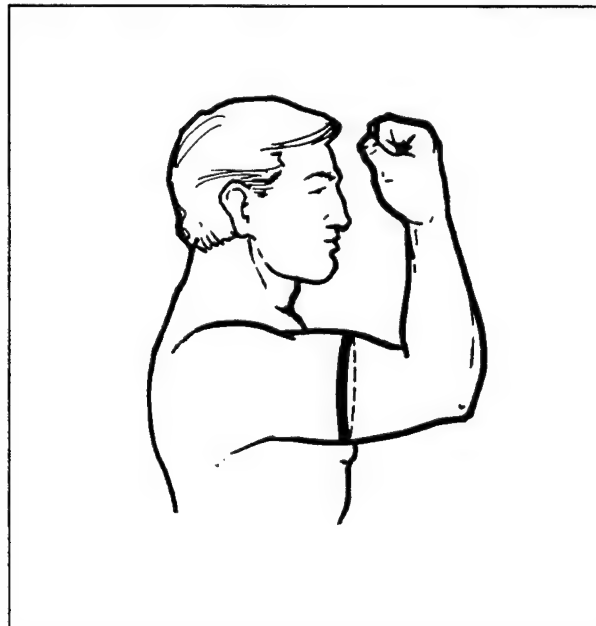
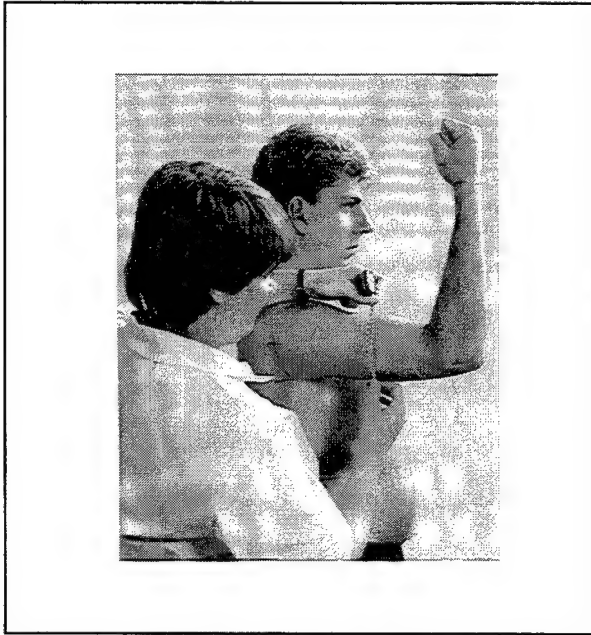
**(3) Ankle Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
207.1	Mean	8.15
0.5	SE(Mean)	0.02
12.3	StDev	0.48
0.4	SE(StDev)	0.01
173.0	Minimum	6.81
261.0	Maximum	10.28
Coefficient of Variation		5.9%
Symmetry----Veta I		0.34
Kurtosis----Veta II		3.40
Sample Size		580
<b>Percentiles</b>		
Millimeters		Inches
181.3	1st	7.14
184.1	2nd	7.25
185.9	3rd	7.32
188.3	5th	7.41
192.1	10th	7.56
194.7	15th	7.67
196.8	20th	7.75
198.7	25th	7.82
200.3	30th	7.89
201.9	35th	7.95
203.5	40th	8.01
205.0	45th	8.07
206.5	50th	8.13
208.0	55th	8.19
209.6	60th	8.25
211.2	65th	8.32
213.0	70th	8.39
215.0	75th	8.46
217.2	80th	8.55
219.8	85th	8.65
223.2	90th	8.79
228.5	95th	8.99
232.0	97th	9.13
234.6	98th	9.23
238.7	99th	9.40

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
222.4	Mean	8.76
0.5	SE(Mean)	0.02
13.5	StDev	0.53
0.4	SE(StDev)	0.01
180.0	Minimum	7.09
267.0	Maximum	10.51
Coefficient of Variation		6.1%
Symmetry----Veta I		0.22
Kurtosis----Veta II		2.79
Sample Size		733
<b>Percentiles</b>		
Millimeters		Inches
196.1	1st	7.72
197.7	2nd	7.78
199.0	3rd	7.84
201.1	5th	7.92
204.9	10th	8.07
207.9	15th	8.18
210.3	20th	8.28
212.5	25th	8.37
214.5	30th	8.45
216.4	35th	8.52
218.3	40th	8.59
220.1	45th	8.66
221.9	50th	8.74
223.7	55th	8.81
225.5	60th	8.88
227.4	65th	8.95
229.4	70th	9.03
231.6	75th	9.12
234.0	80th	9.21
236.8	85th	9.32
240.3	90th	9.46
245.4	95th	9.66
248.7	97th	9.79
251.0	98th	9.88
254.8	99th	10.03

#### **(4) Biceps Circumference, Flexed**

The circumference of the right upper arm around the flexed biceps muscle is measured with a tape held perpendicular to the long axis of the upper arm. The subject stands with the upper arm extended horizontally and the elbow flexed 90 degrees. The fist is clenched and held facing the head, and the subject exerts maximum effort in "making a muscle."



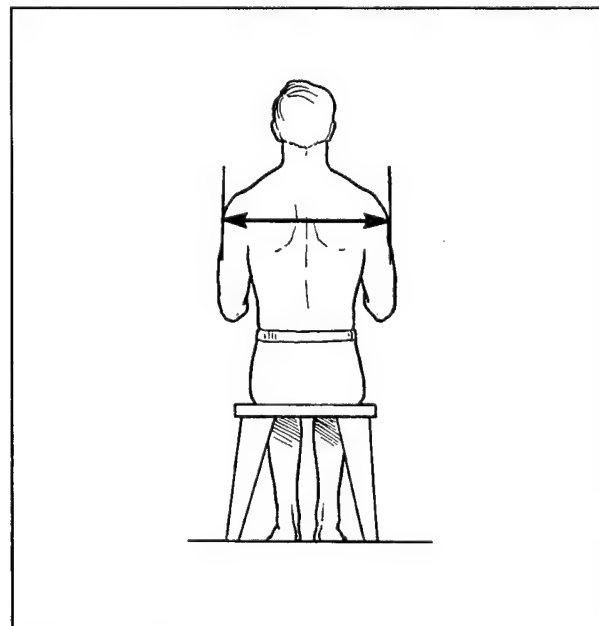
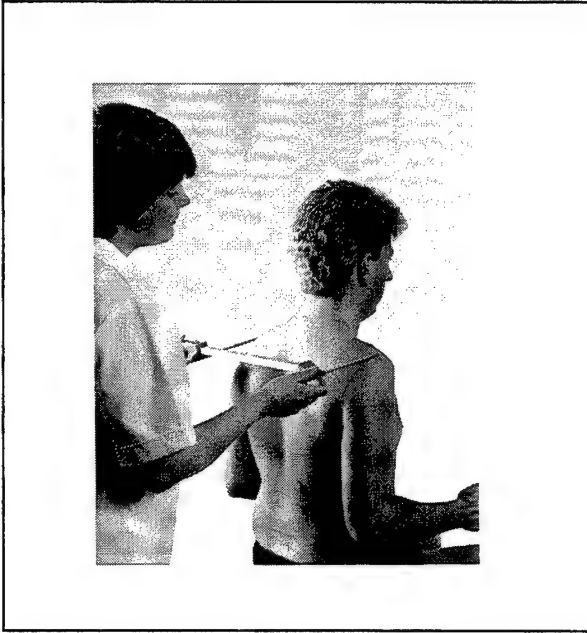
**(4) Biceps Circumference, Flexed**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
281.5	Mean	11.08
1.0	SE(Mean)	0.04
23.2	StDev	0.91
0.7	SE(StDev)	0.03
225.0	Minimum	8.86
355.0	Maximum	13.98
Coefficient of Variation		8.2%
Symmetry----Veta I		0.36
Kurtosis----Veta II		3.01
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
229.3	1st	9.03
237.0	2nd	9.33
241.2	3rd	9.50
246.4	5th	9.70
253.6	10th	9.99
258.3	15th	10.17
261.9	20th	10.31
265.2	25th	10.44
268.2	30th	10.56
271.0	35th	10.67
273.8	40th	10.78
276.6	45th	10.89
279.4	50th	11.00
282.4	55th	11.12
285.4	60th	11.24
288.7	65th	11.37
292.3	70th	11.51
296.3	75th	11.66
300.8	80th	11.84
306.2	85th	12.06
313.1	90th	12.33
323.2	95th	12.72
329.3	97th	12.96
333.5	98th	13.13
339.2	99th	13.36

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
337.2	Mean	13.27
1.0	SE(Mean)	0.04
26.7	StDev	1.05
0.7	SE(StDev)	0.03
268.0	Minimum	10.55
439.0	Maximum	17.28
Coefficient of Variation		7.9%
Symmetry----Veta I		0.21
Kurtosis----Veta II		3.22
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
273.9	1st	10.78
282.6	2nd	11.12
287.7	3rd	11.33
294.4	5th	11.59
304.1	10th	11.97
310.3	15th	12.22
315.2	20th	12.41
319.4	25th	12.57
323.1	30th	12.72
326.5	35th	12.86
329.8	40th	12.98
333.0	45th	13.11
336.2	50th	13.24
339.4	55th	13.36
342.7	60th	13.49
346.2	65th	13.63
349.8	70th	13.77
353.9	75th	13.93
358.6	80th	14.12
364.1	85th	14.33
371.2	90th	14.61
382.2	95th	15.05
389.5	97th	15.34
395.0	98th	15.55
403.9	99th	15.90

## (5) Bideloid Breadth

The maximum horizontal distance between the lateral margins of the upper arms on the deltoid muscles is measured with a beam caliper. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is made at the maximum point of quiet respiration.



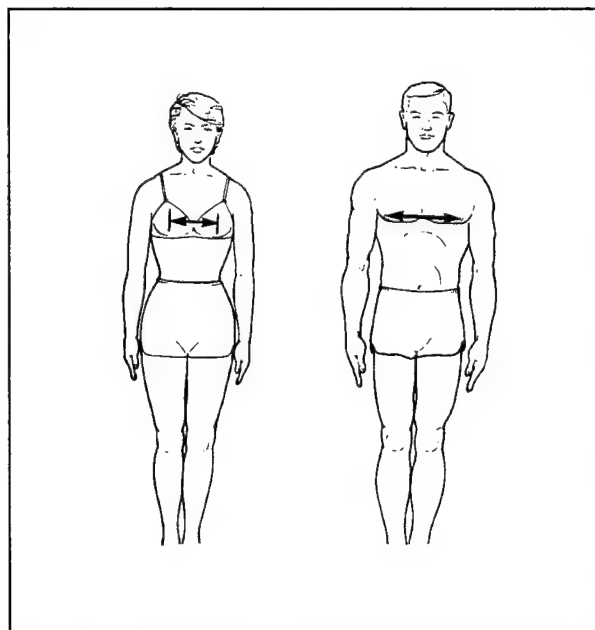
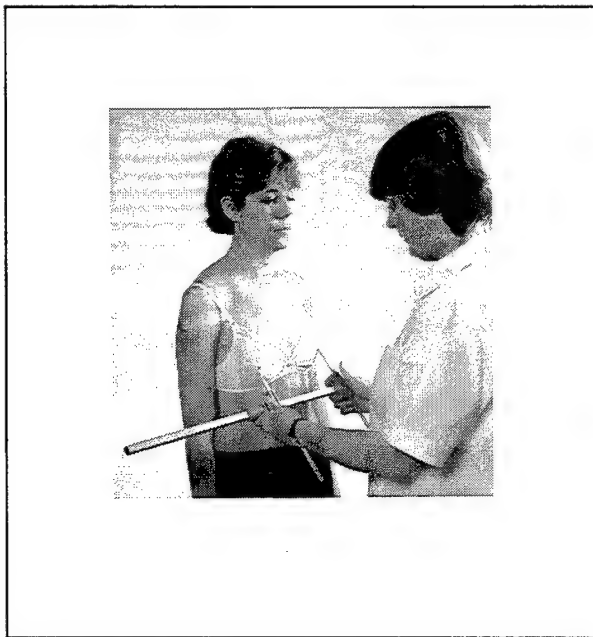
**(5) Bideltoid Breadth**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
432.7	Mean	17.03
0.9	SE(Mean)	0.04
22.5	StDev	0.88
0.7	SE(StDev)	0.03
358.0	Minimum	14.09
501.0	Maximum	19.72
Coefficient of Variation		5.2%
Symmetry----Veta I		0.07
Kurtosis----Veta II		3.34
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
376.8	1st	14.84
385.2	2nd	15.17
390.1	3rd	15.36
396.3	5th	15.60
405.0	10th	15.95
410.5	15th	16.16
414.7	20th	16.33
418.3	25th	16.47
421.4	30th	16.59
424.3	35th	16.70
427.0	40th	16.81
429.6	45th	16.91
432.3	50th	17.02
434.9	55th	17.12
437.6	60th	17.23
440.5	65th	17.34
443.5	70th	17.46
446.9	75th	17.59
450.8	80th	17.75
455.4	85th	17.93
461.5	90th	18.17
471.0	95th	18.54
477.5	97th	18.80
482.5	98th	19.00
490.6	99th	19.32

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
494.3	Mean	19.46
1.0	SE(Mean)	0.04
27.0	StDev	1.06
0.7	SE(StDev)	0.03
420.0	Minimum	16.54
593.0	Maximum	23.35
Coefficient of Variation		5.5%
Symmetry----Veta I		0.07
Kurtosis----Veta II		2.96
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
431.9	1st	17.00
439.1	2nd	17.29
443.7	3rd	17.47
450.0	5th	17.72
459.7	10th	18.10
466.2	15th	18.36
471.4	20th	18.56
475.9	25th	18.74
480.0	30th	18.90
483.7	35th	19.04
487.3	40th	19.18
490.7	45th	19.32
494.1	50th	19.45
497.6	55th	19.59
501.0	60th	19.73
504.6	65th	19.87
508.4	70th	20.01
512.4	75th	20.18
517.0	80th	20.35
522.3	85th	20.56
528.9	90th	20.82
538.6	95th	21.21
544.9	97th	21.45
549.4	98th	21.63
556.4	99th	21.91

## (6) Bustpoint/Thelion-Bustpoint/Thelion Breadth

The distance between the right and left bustpoint landmarks on women and the center of the nipples (thelion) on men is measured with a beam caliper. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



**(6) Bustpoint/Thelion-Bustpoint/Thelion Breadth**

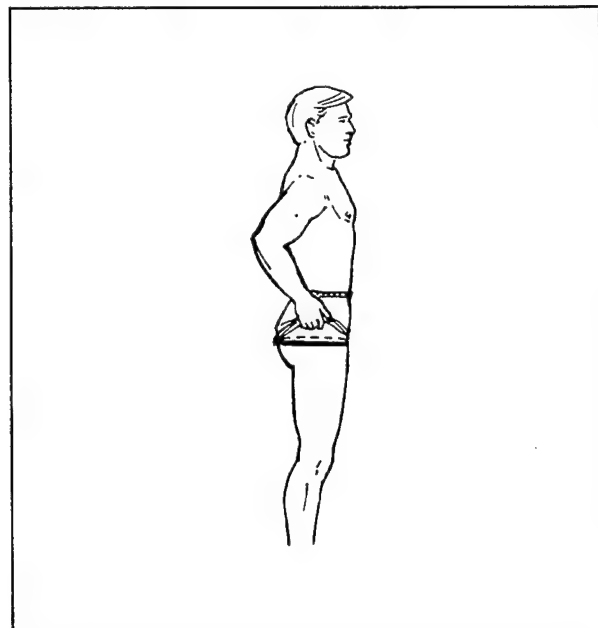
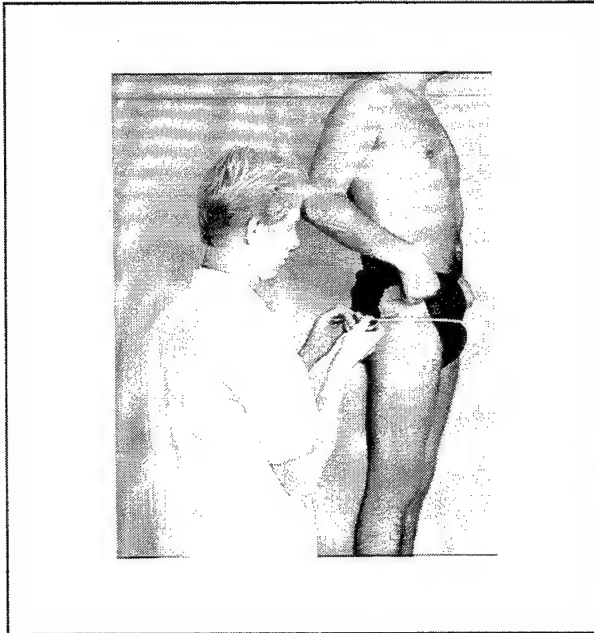
<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
183.7	Mean	7.23
0.7	SE(Mean)	0.03
17.0	StDev	0.67
0.5	SE(StDev)	0.02
128.0	Minimum	5.04
232.0	Maximum	9.13
Coefficient of Variation		9.2%
Symmetry---Veta I		-0.01
Kurtosis---Veta II		2.91
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
145.0	1st	5.71
149.2	2nd	5.87
151.9	3rd	5.98
155.7	5th	6.13
161.8	10th	6.37
166.0	15th	6.54
169.3	20th	6.67
172.2	25th	6.78
174.8	30th	6.88
177.2	35th	6.98
179.5	40th	7.07
181.6	45th	7.15
183.8	50th	7.24
185.9	55th	7.32
188.1	60th	7.41
190.3	65th	7.49
192.7	70th	7.59
195.2	75th	7.69
198.0	80th	7.80
201.3	85th	7.92
205.4	90th	8.09
211.6	95th	8.33
215.7	97th	8.49
218.7	98th	8.61
223.6	99th	8.81

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
221.6	Mean	8.73
0.7	SE(Mean)	0.03
19.4	StDev	0.76
0.5	SE(StDev)	0.02
167.0	Minimum	6.57
283.0	Maximum	11.14
Coefficient of Variation		8.8%
Symmetry---Veta I		0.11
Kurtosis---Veta II		2.92
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
177.1	1st	6.97
182.7	2nd	7.19
186.1	3rd	7.33
190.5	5th	7.50
197.1	10th	7.76
201.6	15th	7.94
205.1	20th	8.07
208.2	25th	8.20
210.9	30th	8.30
213.5	35th	8.41
216.0	40th	8.51
218.5	45th	8.60
220.9	50th	8.70
223.4	55th	8.80
226.0	60th	8.90
228.7	65th	9.00
231.5	70th	9.12
234.7	75th	9.24
238.2	80th	9.38
242.3	85th	9.54
247.6	90th	9.75
255.3	95th	10.05
260.2	97th	10.24
263.6	98th	10.38
268.8	99th	10.58



## (7) Buttock Circumference

The horizontal circumference of the trunk at the level of the maximum protrusion of the right buttock is measured with a tape. The subject stands erect with the heels together and the weight equally distributed on both feet.



**(7) Buttock Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
974.5	Mean	38.36
2.6	SE(Mean)	0.10
62.4	StDev	2.46
1.8	SE(StDev)	0.07
783.0	Minimum	30.83
1167.0	Maximum	45.94
Coefficient of Variation		6.4%
Symmetry----Veta I		0.23
Kurtosis----Veta II		3.06
Sample Size		582

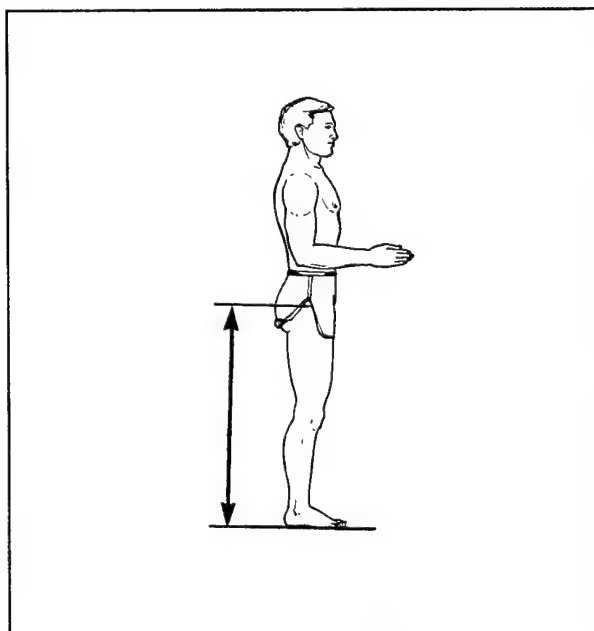
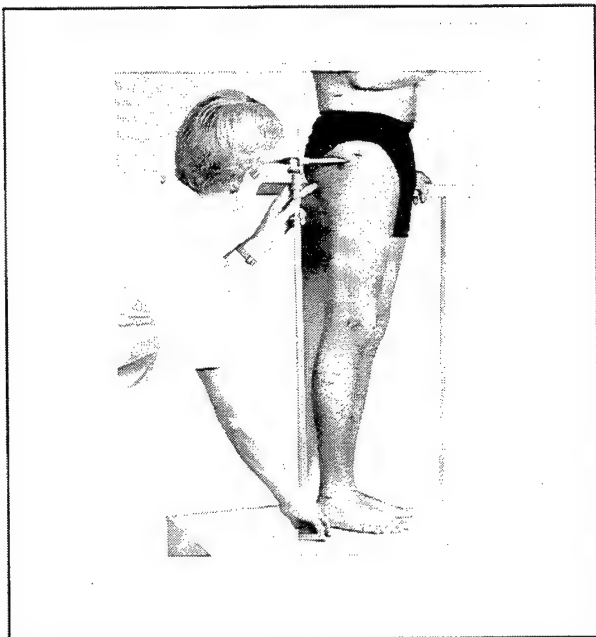
<b>Percentiles</b>		
Millimeters		Inches
839.8	1st	33.06
855.4	2nd	33.68
865.0	3rd	34.06
877.8	5th	34.56
897.5	10th	35.33
910.9	15th	35.86
921.7	20th	36.29
931.2	25th	36.66
939.8	30th	37.00
947.9	35th	37.32
955.8	40th	37.63
963.5	45th	37.93
971.3	50th	38.24
979.2	55th	38.55
987.4	60th	38.87
996.0	65th	39.21
1005.1	70th	39.57
1015.2	75th	39.97
1026.7	80th	40.42
1040.1	85th	40.95
1057.4	90th	41.63
1083.0	95th	42.64
1099.6	97th	43.29
1111.6	98th	43.76
1129.9	99th	44.48

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
995.0	Mean	39.17
2.3	SE(Mean)	0.09
62.1	StDev	2.44
1.6	SE(StDev)	0.06
821.0	Minimum	32.32
1239.0	Maximum	48.78
Coefficient of Variation		6.2%
Symmetry----Veta I		0.16
Kurtosis----Veta II		2.99
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
854.6	1st	33.64
872.4	2nd	34.35
883.1	3rd	34.77
897.1	5th	35.32
918.0	10th	36.14
931.9	15th	36.69
942.9	20th	37.12
952.6	25th	37.50
961.3	30th	37.85
969.5	35th	38.17
977.3	40th	38.48
985.1	45th	38.78
992.8	50th	39.09
1000.6	55th	39.40
1008.7	60th	39.71
1017.1	65th	40.04
1026.1	70th	40.40
1036.0	75th	40.79
1047.1	80th	41.22
1060.1	85th	41.74
1076.5	90th	42.38
1100.6	95th	43.33
1115.7	97th	43.92
1126.3	98th	44.34
1142.1	99th	44.96

## (8) Buttock Height

The vertical distance between a standing surface and the level of the maximum protrusion of the right buttock is measured with an anthropometer at the right side of the thigh. The subject stands erect with the heels together and the weight distributed equally on both feet.



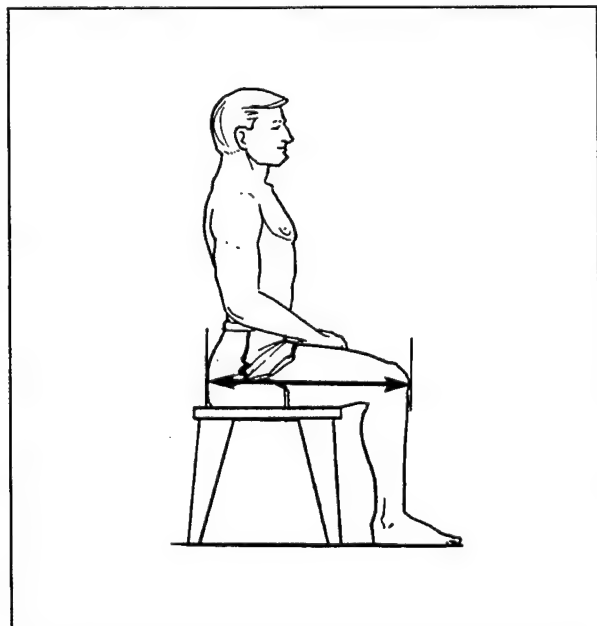
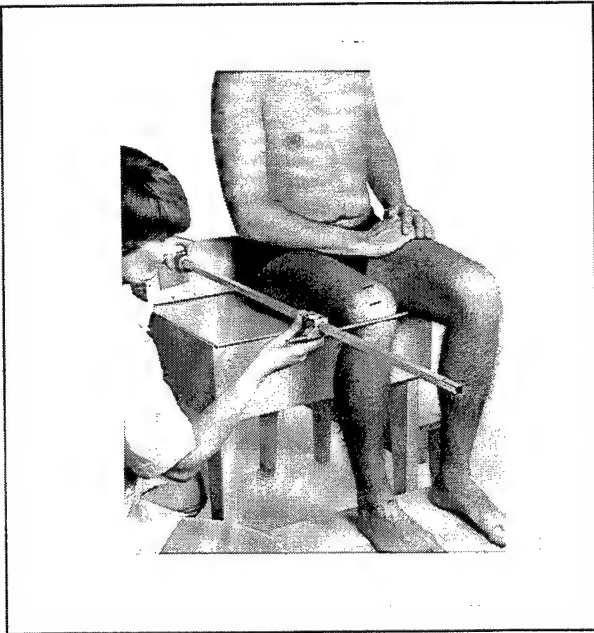
**(8) Buttock Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
828.1	Mean	32.60
1.9	SE(Mean)	0.08
46.9	StDev	1.84
1.4	SE(StDev)	0.05
653.0	Minimum	25.71
1002.0	Maximum	39.45
Coefficient of Variation		5.7%
Symmetry---Veta I		0.17
Kurtosis---Veta II		3.46
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
720.0	1st	28.34
734.4	2nd	28.91
743.1	3rd	29.25
754.3	5th	29.70
770.8	10th	30.35
781.5	15th	30.77
789.9	20th	31.10
797.1	25th	31.38
803.6	30th	31.64
809.6	35th	31.87
815.3	40th	32.10
820.9	45th	32.32
826.5	50th	32.54
832.1	55th	32.76
837.9	60th	32.99
843.9	65th	33.23
850.4	70th	33.48
857.6	75th	33.76
865.7	80th	34.08
875.4	85th	34.46
887.9	90th	34.96
907.1	95th	35.71
920.0	97th	36.22
929.6	98th	36.60
945.0	99th	37.20

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
883.7	Mean	34.79
1.7	SE(Mean)	0.07
45.2	StDev	1.78
1.2	SE(StDev)	0.05
715.0	Minimum	28.15
1033.0	Maximum	40.67
Coefficient of Variation		5.1%
Symmetry---Veta I		0.10
Kurtosis---Veta II		3.06
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
777.8	1st	30.62
794.0	2nd	31.26
802.9	3rd	31.61
813.9	5th	32.04
829.1	10th	32.64
838.7	15th	33.02
846.2	20th	33.31
852.8	25th	33.57
858.7	30th	33.81
864.4	35th	34.03
869.9	40th	34.25
875.4	45th	34.47
881.0	50th	34.69
886.7	55th	34.91
892.7	60th	35.15
899.0	65th	35.39
905.8	70th	35.66
913.4	75th	35.96
922.0	80th	36.30
932.0	85th	36.69
944.6	90th	37.19
962.5	95th	37.89
973.0	97th	38.31
979.8	98th	38.58
988.6	99th	38.92

## (9) Buttock-Knee Length

The horizontal distance between a buttock plate placed at the most posterior point on either buttock and the anterior point of the right knee is measured with an anthropometer. The subject sits erect. The thighs are parallel and the knees flexed 90 degrees with the feet in line with the thighs.



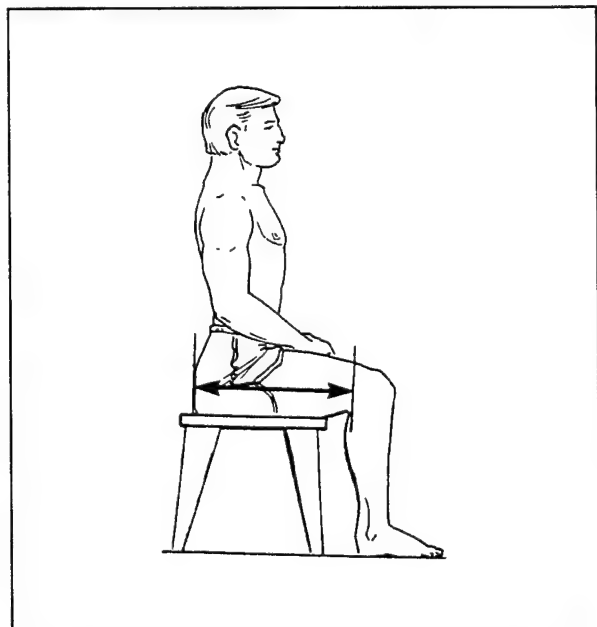
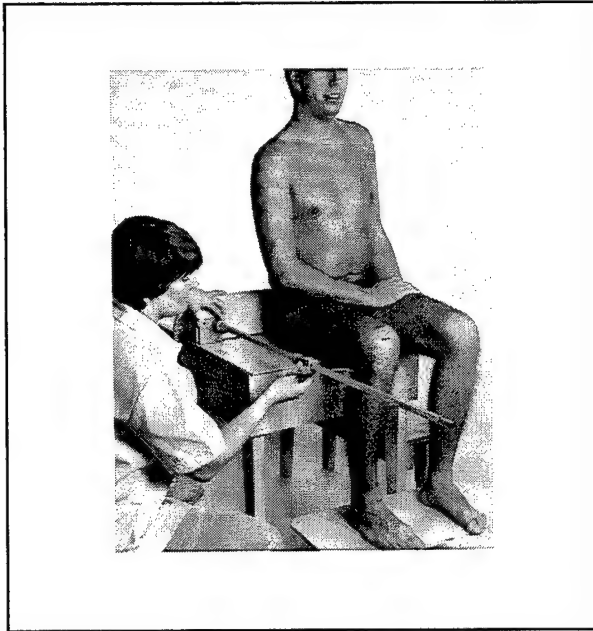
**(9) Buttock-Knee Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
583.3	Mean	22.96
1.3	SE(Mean)	0.05
30.3	StDev	1.19
0.9	SE(StDev)	0.03
479.0	Minimum	18.86
687.0	Maximum	27.05
Coefficient of Variation		5.2%
Symmetry---Veta I		0.08
Kurtosis---Veta II		3.18
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
511.6	1st	20.14
521.9	2nd	20.55
527.8	3rd	20.78
535.4	5th	21.08
546.2	10th	21.50
553.2	15th	21.78
558.6	20th	21.99
563.2	25th	22.17
567.4	30th	22.34
571.4	35th	22.49
575.1	40th	22.64
578.8	45th	22.79
582.5	50th	22.93
586.2	55th	23.08
590.1	60th	23.23
594.1	65th	23.39
598.4	70th	23.56
603.1	75th	23.74
608.5	80th	23.96
614.7	85th	24.20
622.6	90th	24.51
634.0	95th	24.96
641.1	97th	25.24
646.1	98th	25.44
653.2	99th	25.71

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
614.6	Mean	24.20
1.1	SE(Mean)	0.04
30.2	StDev	1.19
0.8	SE(StDev)	0.03
506.0	Minimum	19.92
693.0	Maximum	27.28
Coefficient of Variation		4.9%
Symmetry---Veta I		0.03
Kurtosis---Veta II		2.83
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
546.1	1st	21.50
554.3	2nd	21.82
559.3	3rd	22.02
566.0	5th	22.28
576.2	10th	22.69
583.2	15th	22.96
588.7	20th	23.18
593.6	25th	23.37
598.0	30th	23.54
602.1	35th	23.70
606.1	40th	23.86
609.9	45th	24.01
613.8	50th	24.17
617.8	55th	24.32
621.8	60th	24.48
626.0	65th	24.65
630.4	70th	24.82
635.3	75th	25.01
640.8	80th	25.23
647.1	85th	25.47
655.0	90th	25.79
666.3	95th	26.23
673.3	97th	26.51
678.2	98th	26.70
685.2	99th	26.98

## (10) Buttock-Popliteal Length

The horizontal distance between a buttock plate placed at the most posterior point on either buttock and the back of the right knee (the popliteal fossa at the dorsal juncture of the calf and thigh) is measured with an anthropometer. The subject sits erect. The thighs are parallel and the knees flexed 90 degrees with the feet in line with the thighs.



**(10) Buttock-Popliteal Length**

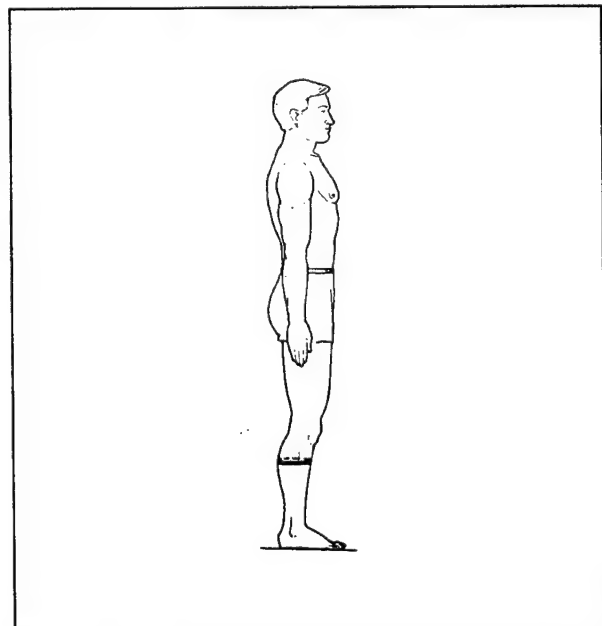
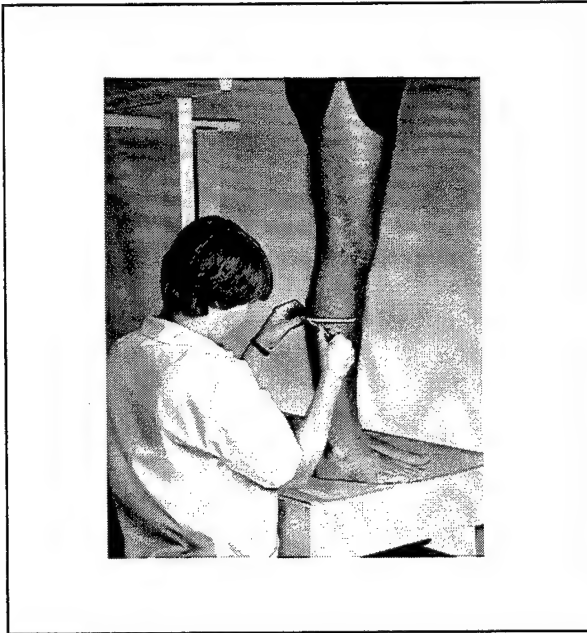
<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
476.9	Mean	18.78
1.1	SE(Mean)	0.04
27.4	StDev	1.08
0.8	SE(StDev)	0.03
394.0	Minimum	15.51
578.0	Maximum	22.76
Coefficient of Variation		5.8%
Symmetry---Veta I		0.09
Kurtosis---Veta II		3.19
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
411.4	1st	16.19
420.5	2nd	16.55
425.8	3rd	16.77
432.7	5th	17.04
442.6	10th	17.43
449.1	15th	17.68
454.1	20th	17.88
458.5	25th	18.05
462.4	30th	18.20
466.0	35th	18.35
469.5	40th	18.48
472.9	45th	18.62
476.3	50th	18.75
479.7	55th	18.89
483.2	60th	19.02
486.9	65th	19.17
490.8	70th	19.32
495.1	75th	19.49
500.0	80th	19.68
505.6	85th	19.91
512.7	90th	20.19
523.1	95th	20.59
529.6	97th	20.85
534.1	98th	21.03
540.7	99th	21.29

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
498.3	Mean	19.62
1.0	SE(Mean)	0.04
27.2	StDev	1.07
0.7	SE(StDev)	0.03
401.0	Minimum	15.79
570.0	Maximum	22.44
Coefficient of Variation		5.5%
Symmetry---Veta I		-0.03
Kurtosis---Veta II		2.94
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
436.1	1st	17.17
443.8	2nd	17.47
448.5	3rd	17.66
454.7	5th	17.90
464.0	10th	18.27
470.3	15th	18.51
475.3	20th	18.71
479.6	25th	18.88
483.6	30th	19.04
487.3	35th	19.19
490.9	40th	19.33
494.4	45th	19.46
497.9	50th	19.60
501.4	55th	19.74
505.0	60th	19.88
508.7	65th	20.03
512.7	70th	20.19
517.0	75th	20.36
521.9	80th	20.55
527.5	85th	20.77
534.5	90th	21.04
544.4	95th	21.43
550.4	97th	21.67
554.5	98th	21.83
560.3	99th	22.06



## (11) Calf Circumference

The maximum horizontal circumference of the right calf is measured with a tape. The subject stands erect with the heels approximately 10 cm apart and the weight distributed equally on both feet.



**(11) Calf Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
354.6	Mean	13.96
1.0	SE(Mean)	0.04
23.6	StDev	0.93
0.7	SE(StDev)	0.03
291.0	Minimum	11.46
459.0	Maximum	18.07
Coefficient of Variation		6.6%
Symmetry---Veta I		0.25
Kurtosis---Veta II		3.20
Sample Size		580

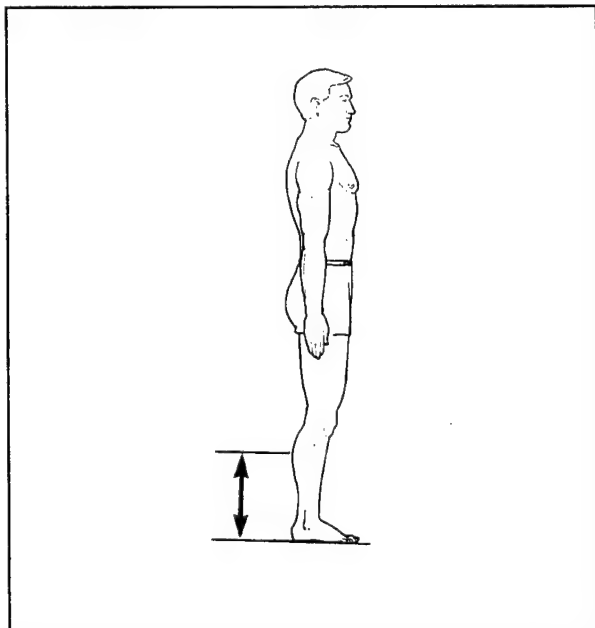
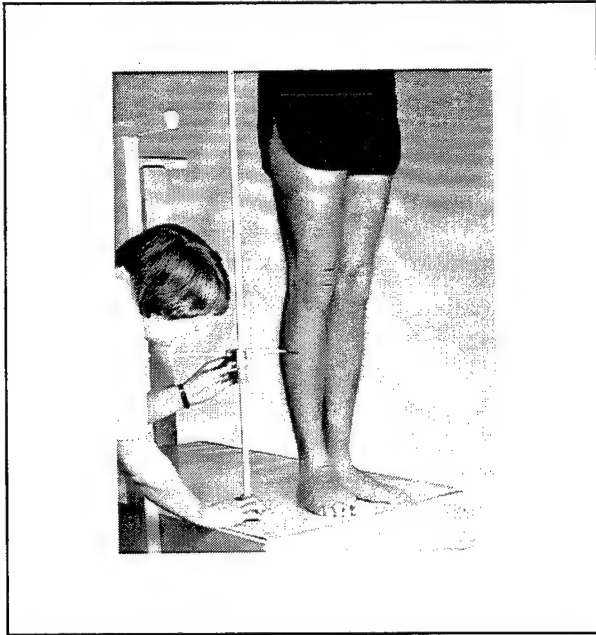
<b>Percentiles</b>		
Millimeters		Inches
303.7	1st	11.96
308.8	2nd	12.16
312.2	3rd	12.29
316.9	5th	12.48
324.6	10th	12.78
330.0	15th	12.99
334.3	20th	13.16
338.1	25th	13.31
341.6	30th	13.45
344.8	35th	13.58
347.9	40th	13.70
350.9	45th	13.82
353.9	50th	13.93
357.0	55th	14.05
360.0	60th	14.17
363.2	65th	14.30
366.6	70th	14.43
370.3	75th	14.58
374.4	80th	14.74
379.2	85th	14.93
385.3	90th	15.17
394.4	95th	15.53
400.4	97th	15.76
404.8	98th	15.94
411.7	99th	16.21

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
382.4	Mean	15.06
1.0	SE(Mean)	0.04
25.9	StDev	1.02
0.7	SE(StDev)	0.03
307.0	Minimum	12.09
461.0	Maximum	18.15
Coefficient of Variation		6.8%
Symmetry---Veta I		0.04
Kurtosis---Veta II		2.86
Sample Size		733

<b>Percentiles</b>		
Millimeters		Inches
321.8	1st	12.67
329.2	2nd	12.96
333.8	3rd	13.14
340.0	5th	13.38
349.3	10th	13.75
355.5	15th	14.00
360.5	20th	14.19
364.8	25th	14.36
368.7	30th	14.51
372.2	35th	14.65
375.6	40th	14.79
379.0	45th	14.92
382.3	50th	15.05
385.6	55th	15.18
388.9	60th	15.31
392.4	65th	15.45
396.1	70th	15.60
400.2	75th	15.75
404.7	80th	15.93
409.9	85th	16.14
416.4	90th	16.40
426.0	95th	16.77
432.1	97th	17.01
436.4	98th	17.18
442.9	99th	17.44

## (12) Calf Height

The vertical distance between a standing surface and the level of the maximum circumference of the right calf is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet.



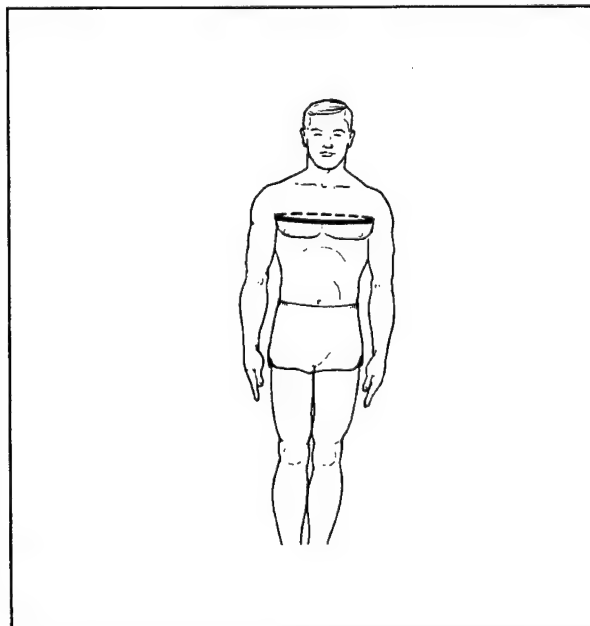
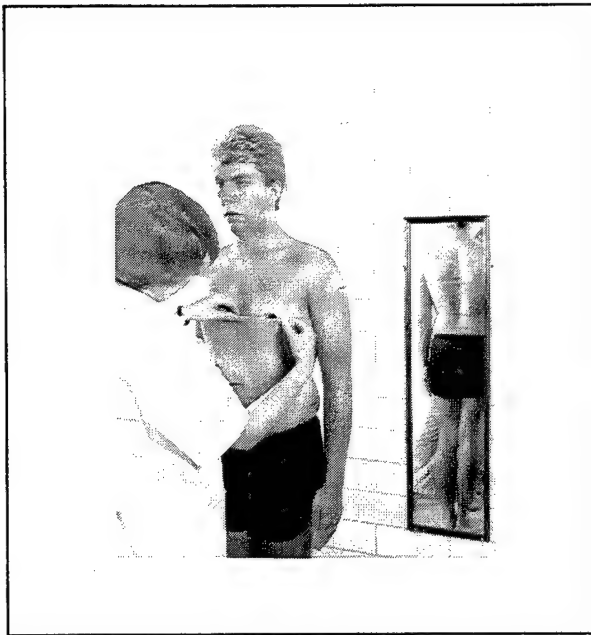
**(12) Calf Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
307.6	Mean	12.11
1.0	SE(Mean)	0.04
23.2	StDev	0.91
0.7	SE(StDev)	0.03
236.0	Minimum	9.29
397.0	Maximum	15.63
Coefficient of Variation		7.6%
Symmetry----Veta I		0.41
Kurtosis----Veta II		3.62
Sample Size		580
<b>Percentiles</b>		
Millimeters		Inches
258.6	1st	10.18
263.8	2nd	10.39
267.2	3rd	10.52
271.9	5th	10.71
279.3	10th	11.00
284.4	15th	11.20
288.4	20th	11.36
291.9	25th	11.49
295.1	30th	11.62
298.1	35th	11.74
300.9	40th	11.85
303.7	45th	11.95
306.4	50th	12.06
309.2	55th	12.17
312.0	60th	12.28
315.0	65th	12.40
318.2	70th	12.53
321.8	75th	12.67
325.8	80th	12.83
330.7	85th	13.02
337.1	90th	13.27
347.4	95th	13.68
354.6	97th	13.96
360.2	98th	14.18
369.7	99th	14.56

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
349.0	Mean	13.74
0.8	SE(Mean)	0.03
22.2	StDev	0.87
0.6	SE(StDev)	0.02
271.0	Minimum	10.67
428.0	Maximum	16.85
Coefficient of Variation		6.4%
Symmetry----Veta I		0.07
Kurtosis----Veta II		2.99
Sample Size		733
<b>Percentiles</b>		
Millimeters		Inches
300.2	1st	11.82
304.8	2nd	12.00
308.0	3rd	12.12
312.6	5th	12.31
320.2	10th	12.61
325.6	15th	12.82
329.9	20th	12.99
333.7	25th	13.14
337.1	30th	13.27
340.2	35th	13.39
343.2	40th	13.51
346.1	45th	13.63
348.9	50th	13.74
351.8	55th	13.85
354.6	60th	13.96
357.6	65th	14.08
360.7	70th	14.20
364.1	75th	14.33
367.8	80th	14.48
372.2	85th	14.65
377.7	90th	14.87
386.1	95th	15.20
391.8	97th	15.42
396.0	98th	15.59
403.1	99th	15.87

### (13) Chest Circumference

The maximum horizontal circumference of the chest at the fullest part of the breast is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



**(13) Chest Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
912.7	Mean	35.93
2.7	SE(Mean)	0.11
66.1	StDev	2.60
1.9	SE(StDev)	0.08
715.0	Minimum	28.15
1159.0	Maximum	45.63
Coefficient of Variation		7.2%
Symmetry----Veta I		0.34
Kurtosis----Veta II		3.29
Sample Size		582

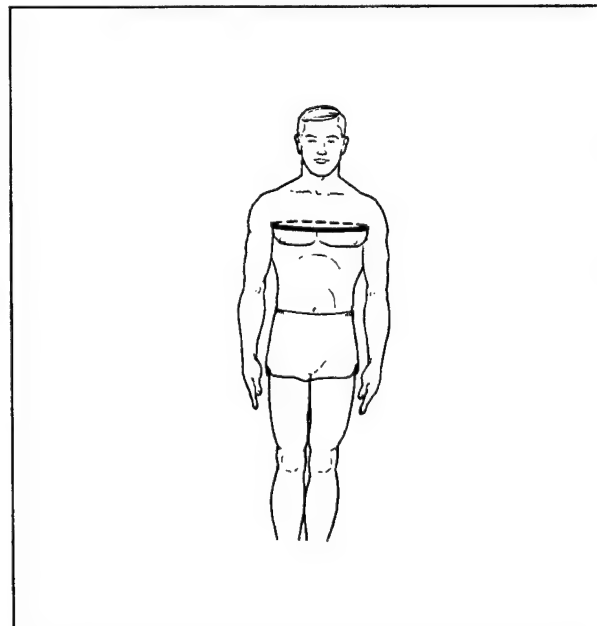
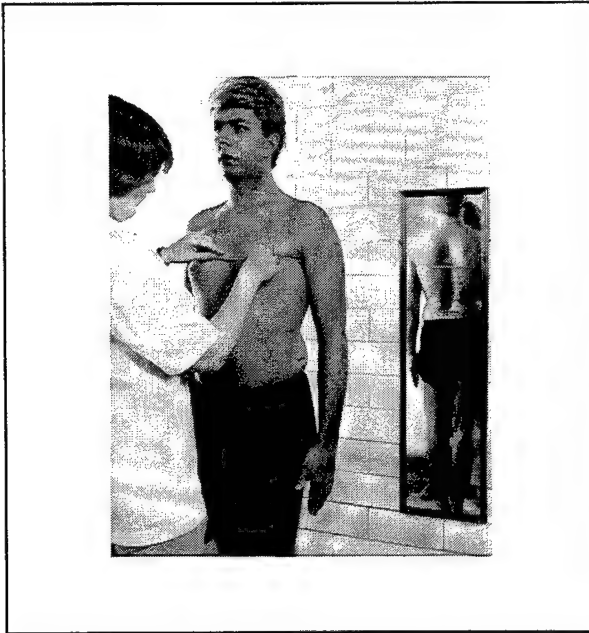
<b>Percentiles</b>		
Millimeters		Inches
764.4	1st	30.10
785.6	2nd	30.93
797.6	3rd	31.40
812.6	5th	31.99
833.9	10th	32.83
847.6	15th	33.37
858.3	20th	33.79
867.7	25th	34.16
876.2	30th	34.50
884.3	35th	34.82
892.2	40th	35.13
900.0	45th	35.43
907.9	50th	35.74
916.0	55th	36.06
924.5	60th	36.40
933.5	65th	36.75
943.2	70th	37.13
954.0	75th	37.56
966.4	80th	38.05
981.2	85th	38.63
1000.2	90th	39.38
1028.7	95th	40.50
1046.8	97th	41.21
1059.7	98th	41.72
1078.8	99th	42.47

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1011.8	Mean	39.83
2.7	SE(Mean)	0.10
72.2	StDev	2.84
1.9	SE(StDev)	0.07
811.0	Minimum	31.93
1281.0	Maximum	50.43
Coefficient of Variation		7.1%
Symmetry----Veta I		0.21
Kurtosis----Veta II		3.03
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
855.6	1st	33.68
871.7	2nd	34.32
882.2	3rd	34.73
896.9	5th	35.31
920.4	10th	36.24
936.8	15th	36.88
950.0	20th	37.40
961.6	25th	37.86
972.1	30th	38.27
982.0	35th	38.66
991.4	40th	39.03
1000.6	45th	39.39
1009.8	50th	39.76
1019.1	55th	40.12
1028.4	60th	40.49
1038.2	65th	40.87
1048.6	70th	41.28
1059.8	75th	41.72
1072.4	80th	42.22
1087.0	85th	42.79
1105.3	90th	43.52
1132.3	95th	44.58
1149.4	97th	45.25
1161.8	98th	45.74
1180.8	99th	46.49

## **(14) Chest Circumference at Scye**

The horizontal circumference of the chest at the level of the scye-at-midspine landmark is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



**(14) Chest Circumference at Scye**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
889.4	Mean	35.02
2.3	SE(Mean)	0.09
54.8	StDev	2.16
1.6	SE(StDev)	0.06
748.0	Minimum	29.45
1121.0	Maximum	44.13
Coefficient of Variation		6.2%
Symmetry---Veta I		0.42
Kurtosis---Veta II		3.62
Sample Size		582

<b>Percentiles</b>		
Millimeters		Inches
770.4	1st	30.33
784.9	2nd	30.90
793.7	3rd	31.25
805.3	5th	31.70
822.6	10th	32.39
834.2	15th	32.84
843.4	20th	33.21
851.5	25th	33.52
858.9	30th	33.81
865.8	35th	34.09
872.5	40th	34.35
879.0	45th	34.61
885.7	50th	34.87
892.4	55th	35.14
899.4	60th	35.41
906.8	65th	35.70
914.7	70th	36.01
923.5	75th	36.36
933.6	80th	36.76
945.6	85th	37.23
961.2	90th	37.84
985.1	95th	38.78
1001.0	97th	39.41
1012.8	98th	39.87
1031.4	99th	40.61

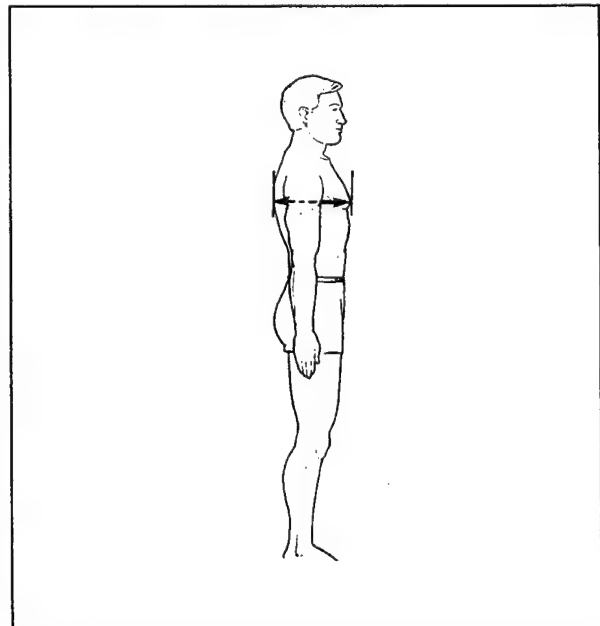
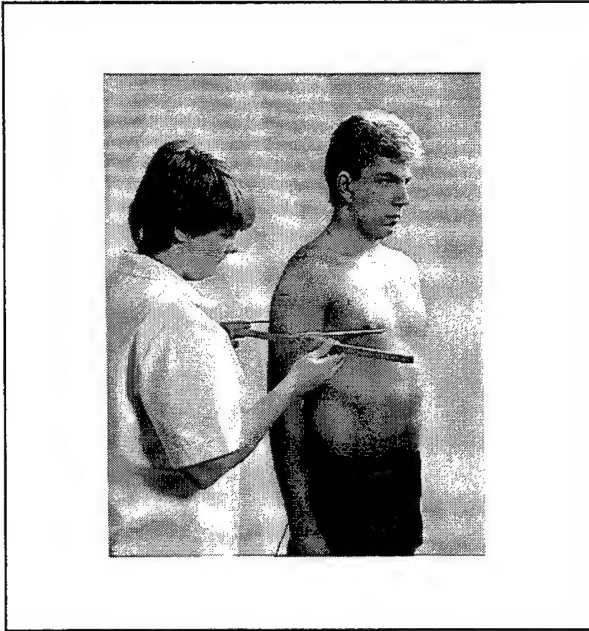
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1037.7	Mean	40.85
2.5	SE(Mean)	0.10
66.8	StDev	2.63
1.7	SE(StDev)	0.07
840.0	Minimum	33.07
1298.0	Maximum	51.10
Coefficient of Variation		6.4%
Symmetry---Veta I		0.13
Kurtosis---Veta II		3.10
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
890.8	1st	35.07
905.6	2nd	35.65
915.4	3rd	36.04
929.3	5th	36.59
951.6	10th	37.46
967.2	15th	38.08
979.8	20th	38.58
990.9	25th	39.01
1001.0	30th	39.41
1010.3	35th	39.78
1019.3	40th	40.13
1027.9	45th	40.47
1036.6	50th	40.81
1045.2	55th	41.15
1054.0	60th	41.50
1063.1	65th	41.85
1072.6	70th	42.23
1082.9	75th	42.63
1094.3	80th	43.08
1107.4	85th	43.60
1123.8	90th	44.24
1147.3	95th	45.17
1162.0	97th	45.75
1172.4	98th	46.16
1188.2	99th	46.78



## (15) Chest Depth

The horizontal distance between the chest, at the level of the right bustpoint on women or the nipple on men, and the back at the same level is measured with a beam caliper. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



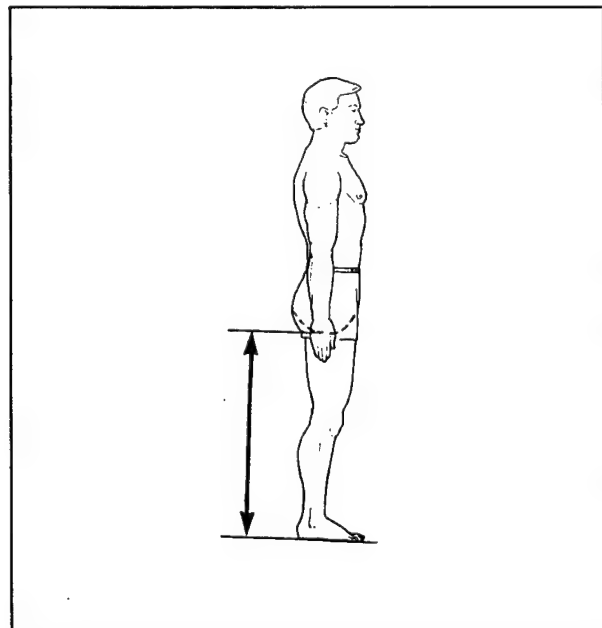
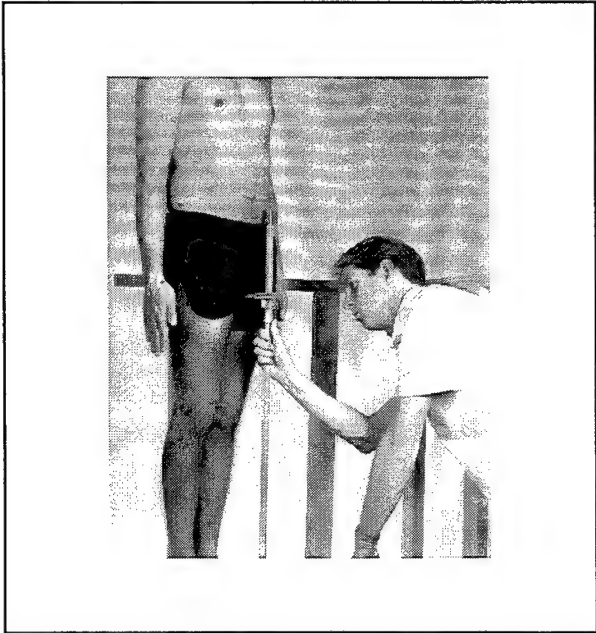
**(15) Chest Depth**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
240.8	Mean	9.48
0.9	SE(Mean)	0.04
22.4	StDev	0.88
0.7	SE(StDev)	0.03
174.0	Minimum	6.85
321.0	Maximum	12.64
Coefficient of Variation		9.3%
Symmetry----Veta I		0.32
Kurtosis----Veta II		3.22
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
189.5	1st	7.46
197.5	2nd	7.78
201.9	3rd	7.95
207.3	5th	8.16
214.4	10th	8.44
218.9	15th	8.62
222.4	20th	8.76
225.5	25th	8.88
228.3	30th	8.99
231.0	35th	9.09
233.6	40th	9.20
236.2	45th	9.30
238.8	50th	9.40
241.6	55th	9.51
244.5	60th	9.63
247.6	65th	9.75
251.0	70th	9.88
254.7	75th	10.03
259.1	80th	10.20
264.3	85th	10.40
270.9	90th	10.67
280.8	95th	11.05
286.9	97th	11.29
291.1	98th	11.46
297.0	99th	11.69

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
249.7	Mean	9.83
0.8	SE(Mean)	0.03
22.4	StDev	0.88
0.6	SE(StDev)	0.02
188.0	Minimum	7.40
322.0	Maximum	12.68
Coefficient of Variation		9.0%
Symmetry----Veta I		0.10
Kurtosis----Veta II		2.78
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
201.2	1st	7.92
206.0	2nd	8.11
209.2	3rd	8.24
213.6	5th	8.41
220.9	10th	8.70
226.0	15th	8.90
230.1	20th	9.06
233.8	25th	9.21
237.2	30th	9.34
240.3	35th	9.46
243.3	40th	9.58
246.3	45th	9.70
249.2	50th	9.81
252.2	55th	9.93
255.2	60th	10.05
258.3	65th	10.17
261.6	70th	10.30
265.1	75th	10.44
269.1	80th	10.59
273.6	85th	10.77
279.2	90th	10.99
287.0	95th	11.30
291.7	97th	11.48
295.0	98th	11.61
299.6	99th	11.79

## (16) Crotch Height

The vertical distance between the standing surface and the crotch is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together and the weight is distributed equally on both feet.



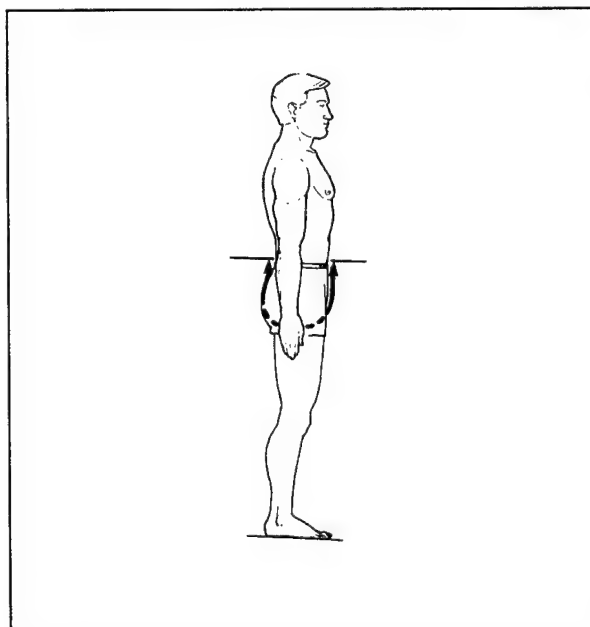
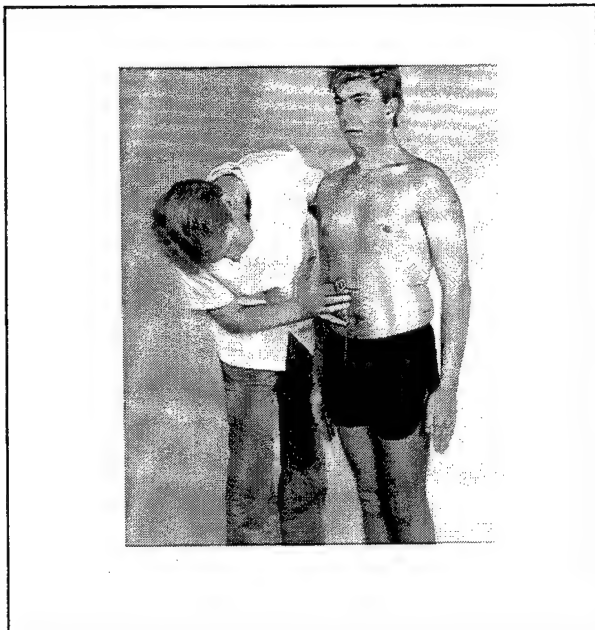
**(16) Crotch Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
760.8	Mean	29.95
1.9	SE(Mean)	0.07
45.5	StDev	1.79
1.3	SE(StDev)	0.05
594.0	Minimum	23.39
903.0	Maximum	35.55
Coefficient of Variation		6.0%
Symmetry----Veta I		0.09
Kurtosis----Veta II		3.14
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
658.5	1st	25.92
669.9	2nd	26.37
677.3	3rd	26.67
687.4	5th	27.06
703.2	10th	27.68
713.9	15th	28.11
722.5	20th	28.44
729.8	25th	28.73
736.5	30th	29.00
742.6	35th	29.24
748.5	40th	29.47
754.1	45th	29.69
759.8	50th	29.91
765.4	55th	30.13
771.1	60th	30.36
777.1	65th	30.59
783.4	70th	30.84
790.3	75th	31.11
798.1	80th	31.42
807.1	85th	31.78
818.8	90th	32.24
836.6	95th	32.94
848.5	97th	33.40
857.4	98th	33.76
872.0	99th	34.33

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
831.3	Mean	32.73
1.6	SE(Mean)	0.06
44.6	StDev	1.76
1.2	SE(StDev)	0.05
675.0	Minimum	26.57
949.0	Maximum	37.36
Coefficient of Variation		5.4%
Symmetry----Veta I		0.02
Kurtosis----Veta II		2.95
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
724.3	1st	28.52
739.5	2nd	29.11
748.2	3rd	29.46
759.4	5th	29.90
775.4	10th	30.53
785.7	15th	30.93
793.8	20th	31.25
800.8	25th	31.53
807.1	30th	31.77
813.0	35th	32.01
818.7	40th	32.23
824.2	45th	32.45
829.8	50th	32.67
835.5	55th	32.89
841.3	60th	33.12
847.4	65th	33.36
853.9	70th	33.62
861.1	75th	33.90
869.2	80th	34.22
878.6	85th	34.59
890.5	90th	35.06
907.6	95th	35.73
918.0	97th	36.14
925.2	98th	36.42
935.3	99th	36.82

## (17) Crotch Length (Omphalion)

The distance between the abdomen at the level of the center of the navel (omphalion) to the same level on the back is measured with a tape passing through the crotch to the right of the genitalia. The tape is held vertically both in front and in back. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration.



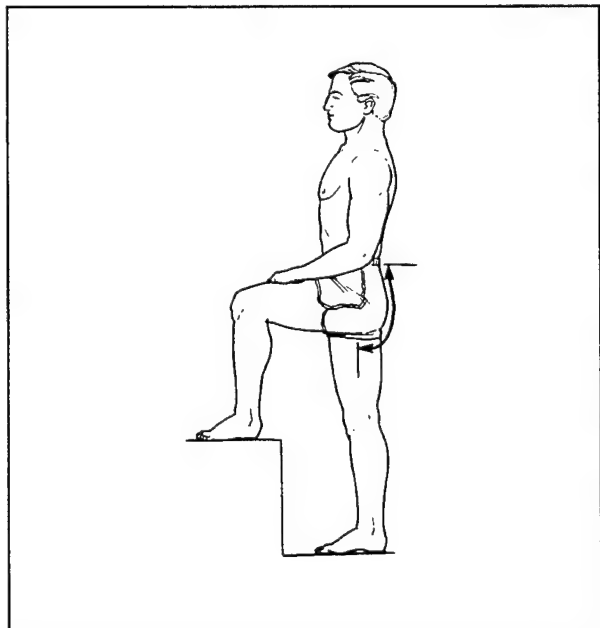
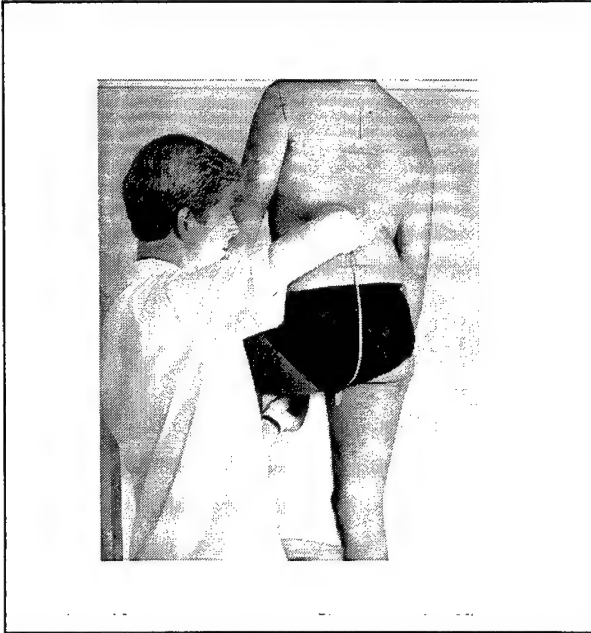
**(17) Crotch Length (Omphalion)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
616.2	Mean	24.26
1.6	SE(Mean)	0.06
39.1	StDev	1.54
1.1	SE(StDev)	0.05
590.0	Minimum	23.23
924.0	Maximum	36.38
Coefficient of Variation		6.3%
Symmetry---Veta I		0.07
Kurtosis---Veta II		3.04
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
523.3	1st	20.60
536.0	2nd	21.10
543.6	3rd	21.40
553.4	5th	21.79
567.7	10th	22.35
576.9	15th	22.71
584.1	20th	23.00
590.3	25th	23.24
595.8	30th	23.46
600.9	35th	23.66
605.8	40th	23.85
610.5	45th	24.04
615.3	50th	24.22
620.0	55th	24.41
624.9	60th	24.60
630.1	65th	24.81
635.5	70th	25.02
641.6	75th	25.26
648.4	80th	25.53
656.5	85th	25.85
666.9	90th	26.26
682.7	95th	26.88
693.2	97th	27.29
700.9	98th	27.60
713.1	99th	28.08

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
649.3	Mean	25.56
1.6	SE(Mean)	0.06
43.0	StDev	1.69
1.1	SE(StDev)	0.04
638.0	Minimum	25.12
976.0	Maximum	38.43
Coefficient of Variation		6.6%
Symmetry---Veta I		0.26
Kurtosis---Veta II		3.17
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
555.1	1st	21.85
565.7	2nd	22.27
572.4	3rd	22.54
581.7	5th	22.90
596.0	10th	23.46
605.7	15th	23.85
613.4	20th	24.15
620.1	25th	24.41
626.1	30th	24.65
631.7	35th	24.87
637.0	40th	25.08
642.2	45th	25.28
647.4	50th	25.49
652.6	55th	25.69
658.0	60th	25.90
663.6	65th	26.13
669.6	70th	26.36
676.2	75th	26.62
683.8	80th	26.92
692.8	85th	27.27
704.6	90th	27.74
723.2	95th	28.47
736.1	97th	28.98
746.1	98th	29.37
762.8	99th	30.03

### **(18) Crotch Length, Posterior (Omphalion)**

The surface distance from the crotch at the inner thigh landmark to the back of the waist at the level of the center of the navel (omphalion) is measured with a tape. The tape passes between the buttocks to the back of the waist. The subject stands with the left foot on a platform so that the knee is flexed.



**(18) Crotch Length, Posterior (Omphalion)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
310.8	Mean	12.24
1.1	SE(Mean)	0.04
25.9	StDev	1.02
0.8	SE(StDev)	0.03
235.0	Minimum	9.25
378.0	Maximum	14.88
Coefficient of Variation		8.3%
Symmetry---Veta I		-0.04
Kurtosis---Veta II		2.92
Sample Size		582

<b>Percentiles</b>		
Millimeters		Inches
248.5	1st	9.78
256.6	2nd	10.10
261.5	3rd	10.30
268.0	5th	10.55
277.6	10th	10.93
284.0	15th	11.18
288.9	20th	11.38
293.3	25th	11.55
297.1	30th	11.70
300.7	35th	11.84
304.1	40th	11.97
307.4	45th	12.10
310.7	50th	12.23
314.0	55th	12.36
317.3	60th	12.49
320.8	65th	12.63
324.5	70th	12.78
328.5	75th	12.93
333.0	80th	13.11
338.3	85th	13.32
344.8	90th	13.58
354.5	95th	13.96
360.6	97th	14.19
364.9	98th	14.37
371.4	99th	14.62

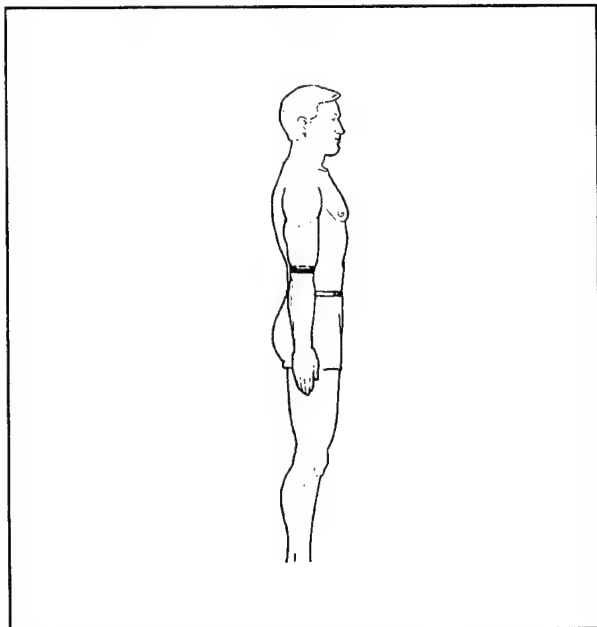
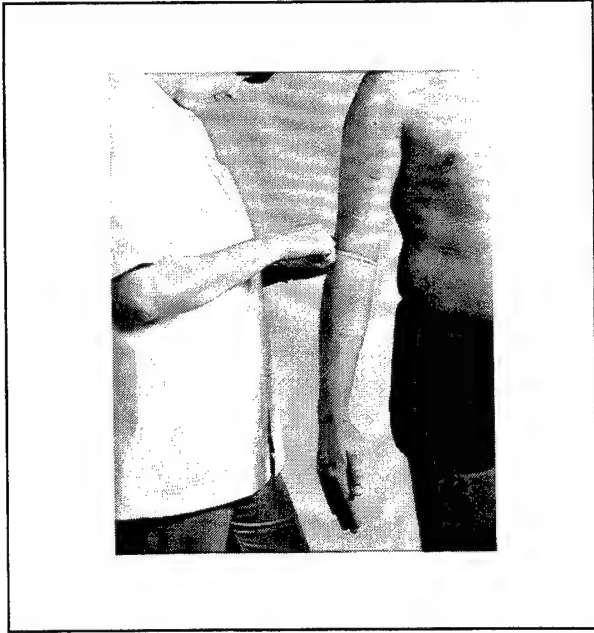
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
318.0	Mean	12.52
0.9	SE(Mean)	0.04
24.3	StDev	0.96
0.6	SE(StDev)	0.02
240.0	Minimum	9.45
403.0	Maximum	15.87
Coefficient of Variation		7.6%
Symmetry---Veta I		0.06
Kurtosis---Veta II		3.20
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
260.8	1st	10.27
267.6	2nd	10.54
272.0	3rd	10.71
278.0	5th	10.95
287.1	10th	11.30
293.2	15th	11.54
298.0	20th	11.73
302.1	25th	11.89
305.7	30th	12.03
309.0	35th	12.16
312.1	40th	12.29
315.1	45th	12.41
318.0	50th	12.52
321.0	55th	12.64
323.9	60th	12.75
327.0	65th	12.87
330.2	70th	13.00
333.7	75th	13.14
337.7	80th	13.30
342.4	85th	13.48
348.4	90th	13.72
357.9	95th	14.09
364.4	97th	14.35
369.4	98th	14.54
377.9	99th	14.88



## (19) Elbow Circumference

The circumference of the right elbow in a plane perpendicular to the long axis of the arm is measured with a tape passing around the elbow at the level of the olecranon-center landmark. The subject stands with the arm straight and slightly away from the side.



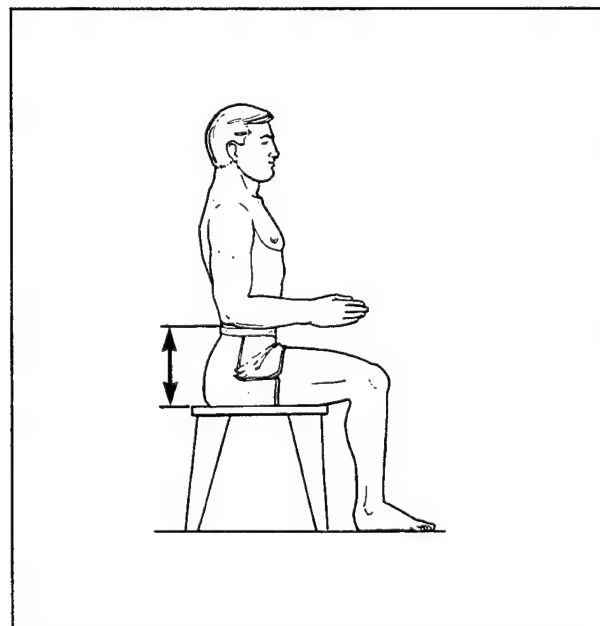
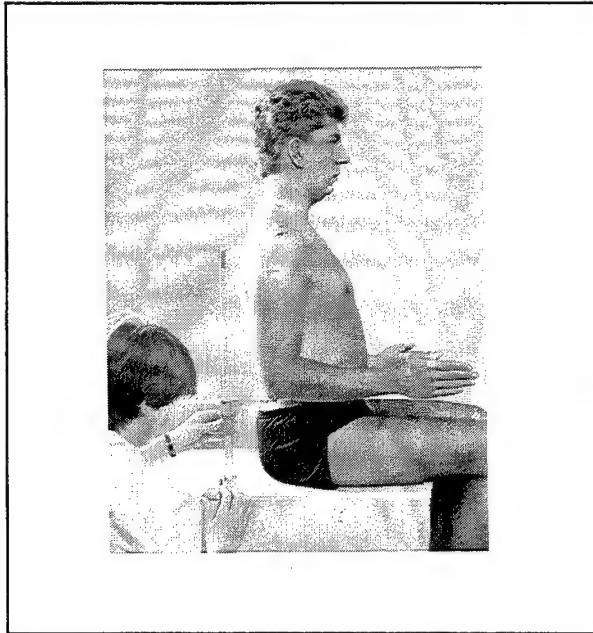
**(19) Elbow Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
238.8	Mean	9.40
0.6	SE(Mean)	0.02
13.7	StDev	0.54
0.4	SE(StDev)	0.02
202.0	Minimum	7.95
290.0	Maximum	11.42
Coefficient of Variation		5.7%
Symmetry---Veta I		0.24
Kurtosis---Veta II		3.12
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
208.7	1st	8.22
211.9	2nd	8.34
214.1	3rd	8.43
216.9	5th	8.54
221.5	10th	8.72
224.6	15th	8.84
227.1	20th	8.94
229.3	25th	9.03
231.3	30th	9.11
233.1	35th	9.18
234.9	40th	9.25
236.6	45th	9.32
238.3	50th	9.38
240.1	55th	9.45
241.8	60th	9.52
243.7	65th	9.59
245.6	70th	9.67
247.8	75th	9.76
250.2	80th	9.85
253.1	85th	9.96
256.7	90th	10.11
262.3	95th	10.32
265.9	97th	10.47
268.7	98th	10.58
273.1	99th	10.75

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
278.3	Mean	10.96
0.6	SE(Mean)	0.02
15.4	StDev	0.61
0.4	SE(StDev)	0.02
235.0	Minimum	9.25
339.0	Maximum	13.35
Coefficient of Variation		5.5%
Symmetry---Veta I		0.21
Kurtosis---Veta II		3.12
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
244.4	1st	9.62
247.9	2nd	9.76
250.2	3rd	9.85
253.5	5th	9.98
258.6	10th	10.18
262.2	15th	10.32
265.1	20th	10.44
267.6	25th	10.54
269.9	30th	10.62
272.0	35th	10.71
274.0	40th	10.79
275.9	45th	10.86
277.9	50th	10.94
279.8	55th	11.02
281.8	60th	11.09
283.8	65th	11.17
286.0	70th	11.26
288.4	75th	11.35
291.1	80th	11.46
294.2	85th	11.58
298.2	90th	11.74
304.3	95th	11.98
308.4	97th	12.14
311.6	98th	12.27
316.6	99th	12.47

## (20) Elbow Rest Height

The vertical distance between a sitting surface and the olecranon landmark on the bottom of the flexed right elbow is measured with an anthropometer. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is taken at the maximum point of quiet respiration.



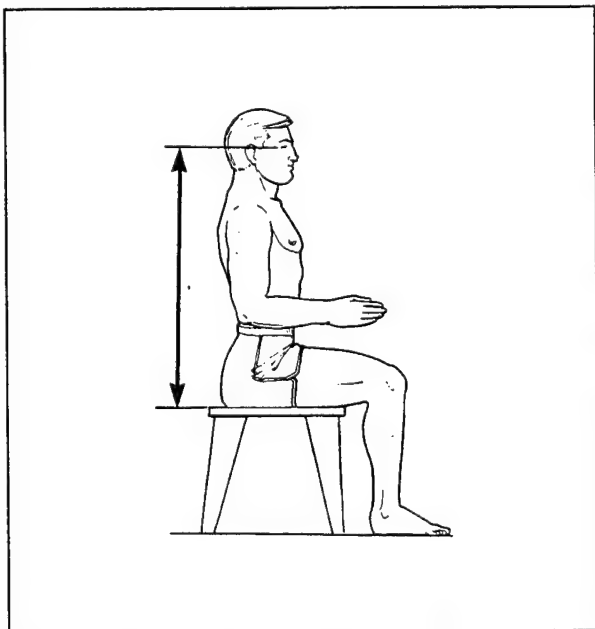
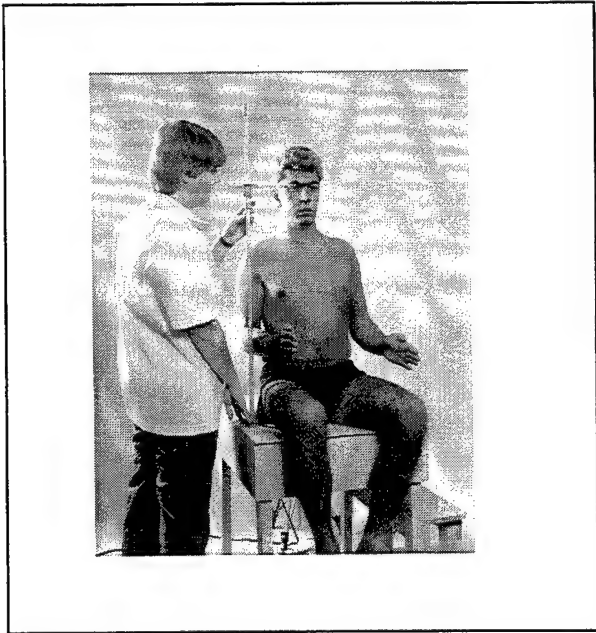
**(20) Elbow Rest Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
231.9	Mean	9.13
0.9	SE(Mean)	0.04
22.4	StDev	0.88
0.7	SE(StDev)	0.03
158.0	Minimum	6.22
300.0	Maximum	11.81
Coefficient of Variation		9.7%
Symmetry----Veta I		-0.11
Kurtosis----Veta II		3.44
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
172.9	1st	6.81
182.4	2nd	7.18
187.8	3rd	7.39
194.7	5th	7.66
204.1	10th	8.04
209.9	15th	8.27
214.3	20th	8.44
218.0	25th	8.58
221.2	30th	8.71
224.1	35th	8.82
226.8	40th	8.93
229.5	45th	9.03
232.1	50th	9.14
234.7	55th	9.24
237.3	60th	9.34
240.1	65th	9.45
243.1	70th	9.57
246.3	75th	9.70
250.0	80th	9.84
254.3	85th	10.01
260.0	90th	10.24
268.7	95th	10.58
274.6	97th	10.81
278.9	98th	10.98
285.9	99th	11.26

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
239.4	Mean	9.43
0.9	SE(Mean)	0.04
24.4	StDev	0.96
0.6	SE(StDev)	0.03
152.0	Minimum	5.98
319.0	Maximum	12.56
Coefficient of Variation		10.2%
Symmetry----Veta I		-0.12
Kurtosis----Veta II		3.34
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
178.9	1st	7.04
186.6	2nd	7.35
191.5	3rd	7.54
198.0	5th	7.80
208.0	10th	8.19
214.5	15th	8.45
219.6	20th	8.64
223.9	25th	8.81
227.6	30th	8.96
231.0	35th	9.10
234.2	40th	9.22
237.2	45th	9.34
240.2	50th	9.46
243.1	55th	9.57
246.1	60th	9.69
249.1	65th	9.81
252.3	70th	9.93
255.7	75th	10.07
259.5	80th	10.22
263.9	85th	10.39
269.7	90th	10.62
278.6	95th	10.97
284.8	97th	11.21
289.6	98th	11.40
297.8	99th	11.72

## (21) Eye Height, Sitting

The vertical distance between a sitting surface and the ectocanthus landmark on the outer corner of the right eye is measured with an anthropometer. The subject sits erect with the head in the Frankfort plane. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The thighs are parallel and the knees are flexed 90 degrees with the feet in line with the thighs. The measurement is taken at the maximum point of quiet respiration.



**(21) Eye Height, Sitting**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
750.6	Mean	29.55
1.3	SE(Mean)	0.05
32.3	StDev	1.27
0.9	SE(StDev)	0.04
645.0	Minimum	25.39
864.0	Maximum	34.02
Coefficient of Variation		4.3%
Symmetry---Veta I		0.13
Kurtosis---Veta II		2.96
Sample Size		582

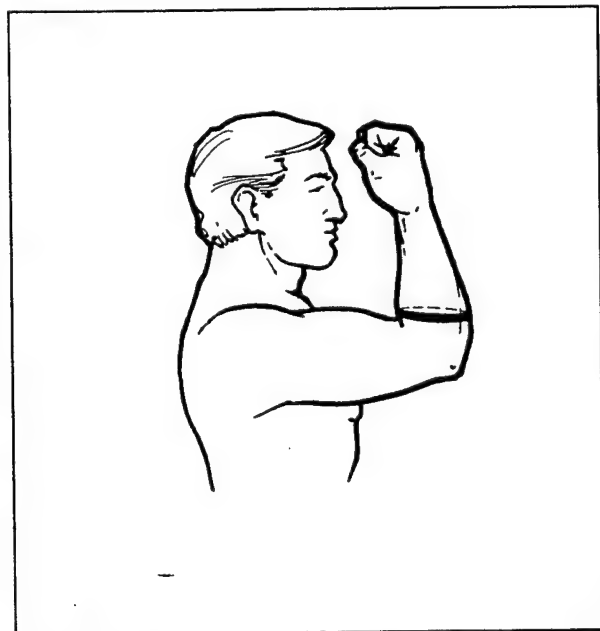
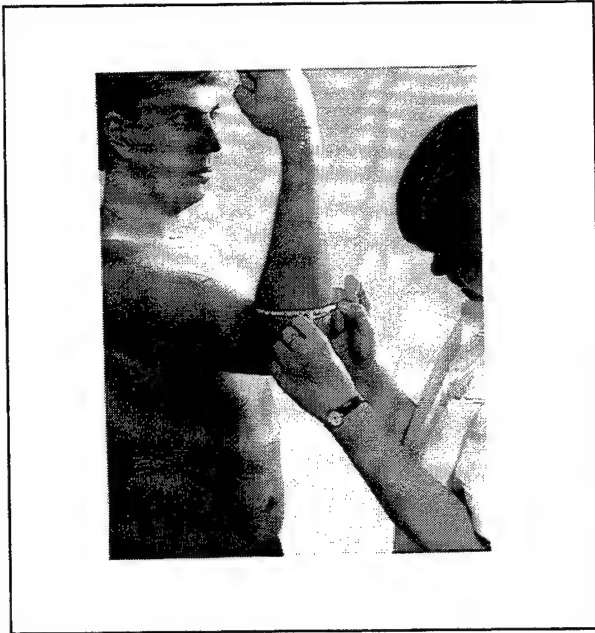
<b>Percentiles</b>		
Millimeters		Inches
679.2	1st	26.74
687.7	2nd	27.08
692.9	3rd	27.28
699.8	5th	27.55
710.3	10th	27.96
717.4	15th	28.24
723.1	20th	28.47
728.2	25th	28.67
732.8	30th	28.85
737.1	35th	29.02
741.2	40th	29.18
745.3	45th	29.34
749.5	50th	29.51
753.6	55th	29.67
757.9	60th	29.84
762.4	65th	30.02
767.1	70th	30.20
772.3	75th	30.41
778.2	80th	30.64
784.9	85th	30.90
793.4	90th	31.23
805.4	95th	31.71
812.6	97th	31.99
817.6	98th	32.19
824.5	99th	32.46

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
800.8	Mean	31.53
1.2	SE(Mean)	0.05
33.5	StDev	1.32
0.9	SE(StDev)	0.03
673.0	Minimum	26.50
903.0	Maximum	35.55
Coefficient of Variation		4.2%
Symmetry---Veta I		-0.01
Kurtosis---Veta II		3.19
Sample Size		736

<b>Percentiles</b>		
Millimeters		Inches
723.0	1st	28.47
732.0	2nd	28.82
737.8	3rd	29.05
745.7	5th	29.36
758.0	10th	29.84
766.4	15th	30.17
772.9	20th	30.43
778.5	25th	30.65
783.6	30th	30.85
788.2	35th	31.03
792.6	40th	31.20
796.8	45th	31.37
800.9	50th	31.53
805.1	55th	31.70
809.3	60th	31.86
813.6	65th	32.03
818.1	70th	32.21
823.1	75th	32.40
828.6	80th	32.62
835.0	85th	32.87
843.2	90th	33.20
855.6	95th	33.68
863.9	97th	34.01
870.1	98th	34.26
880.2	99th	34.66

## **(22) Forearm Circumference, Flexed**

The circumference of the flexed right forearm is measured with a tape passing across the crease at the juncture between the upper arm and the forearm. The measurement is made in a plane perpendicular to the long axis of the forearm. The subject stands with the upper arm extended forward horizontally, the elbow flexed 90 degrees, and the fist tightly clenched and held facing the head.



**(22) Forearm Circumference, Flexed**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
252.3	Mean	9.93
0.6	SE(Mean)	0.02
15.0	StDev	0.59
0.4	SE(StDev)	0.02
212.0	Minimum	8.35
311.0	Maximum	12.24
Coefficient of Variation		
		6.0%
Symmetry---Veta I		
		0.27
Kurtosis---Veta II		
		3.33
Sample Size		582

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
218.4	1st	8.60
222.5	2nd	8.76
225.0	3rd	8.86
228.4	5th	8.99
233.5	10th	9.19
237.0	15th	9.33
239.7	20th	9.44
242.1	25th	9.53
244.2	30th	9.62
246.2	35th	9.69
248.1	40th	9.77
249.9	45th	9.84
251.8	50th	9.91
253.6	55th	9.99
255.5	60th	10.06
257.5	65th	10.14
259.6	70th	10.22
261.9	75th	10.31
264.6	80th	10.42
267.6	85th	10.54
271.6	90th	10.69
277.8	95th	10.94
281.8	97th	11.10
284.9	98th	11.22
289.9	99th	11.41

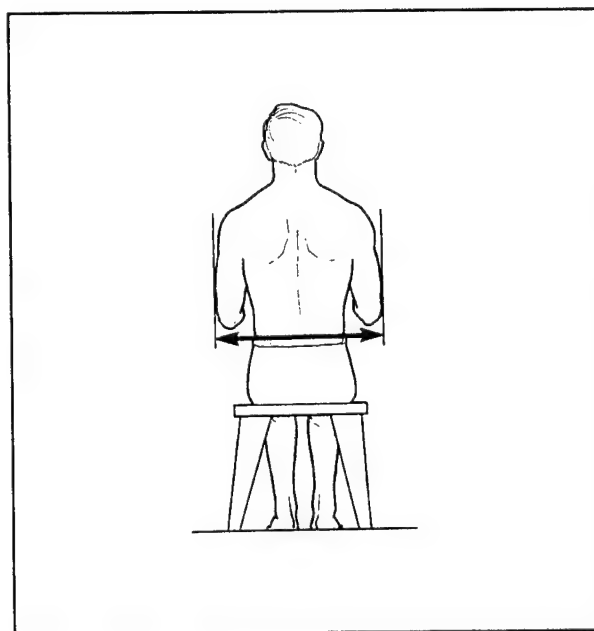
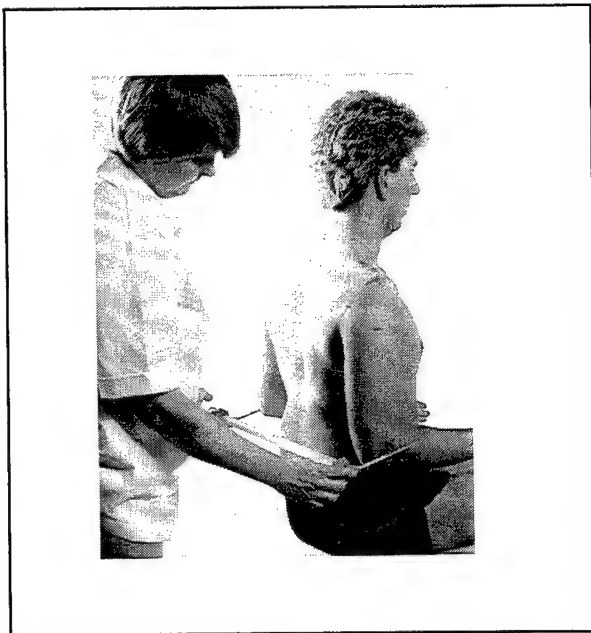
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
303.7	Mean	11.96
0.7	SE(Mean)	0.03
18.4	StDev	0.72
0.5	SE(StDev)	0.02
258.0	Minimum	10.16
375.0	Maximum	14.76
Coefficient of Variation		
		6.1%
Symmetry---Veta I		
		0.18
Kurtosis---Veta II		
		3.09
Sample Size		738

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
262.3	1st	10.33
266.8	2nd	10.51
269.8	3rd	10.62
273.8	5th	10.78
280.2	10th	11.03
284.5	15th	11.20
288.0	20th	11.34
291.0	25th	11.46
293.8	30th	11.57
296.3	35th	11.67
298.7	40th	11.76
301.1	45th	11.85
303.4	50th	11.95
305.8	55th	12.04
308.2	60th	12.13
310.6	65th	12.23
313.2	70th	12.33
316.1	75th	12.44
319.2	80th	12.57
322.9	85th	12.71
327.6	90th	12.90
334.5	95th	13.17
339.0	97th	13.34
342.3	98th	13.47
347.4	99th	13.68



### (23) Forearm-Forearm Breadth

The maximum horizontal distance across the upper body between the outer sides of the forearms is measured with a beam caliper. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is taken at the maximum point of quiet respiration.



**(23) Forearm-Forearm Breadth**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
471.9	Mean	18.58
1.5	SE(Mean)	0.06
36.1	StDev	1.42
1.1	SE(StDev)	0.04
373.0	Minimum	14.68
607.0	Maximum	23.90
Coefficient of Variation		7.6%
Symmetry----Veta I		0.35
Kurtosis----Veta II		3.40
Sample Size		582

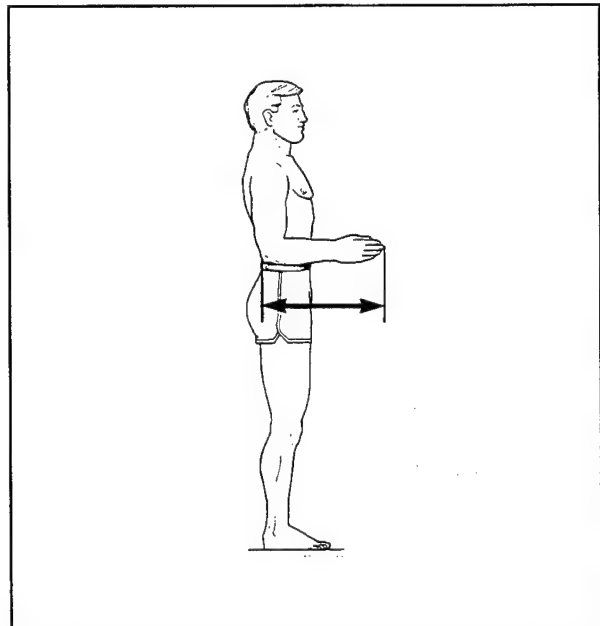
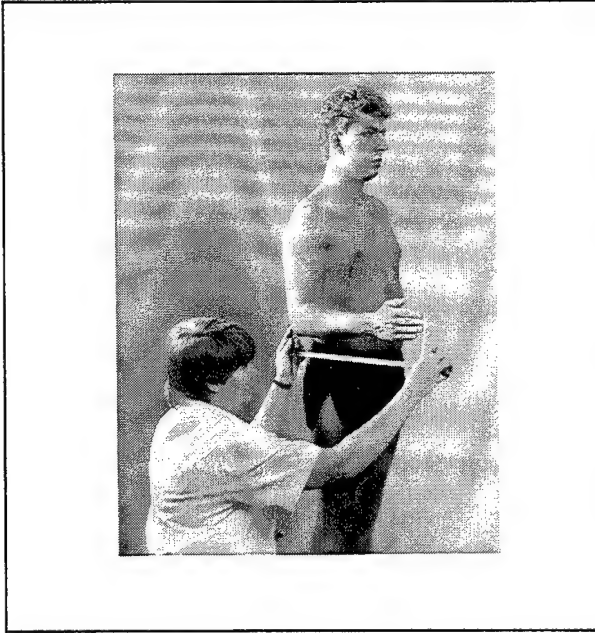
<b>Percentiles</b>		
Millimeters		Inches
397.7	1st	15.66
404.2	2nd	15.91
408.9	3rd	16.10
415.6	5th	16.36
426.8	10th	16.80
434.7	15th	17.12
441.2	20th	17.37
446.9	25th	17.59
452.0	30th	17.80
456.8	35th	17.98
461.4	40th	18.16
465.8	45th	18.34
470.3	50th	18.52
474.8	55th	18.69
479.3	60th	18.87
484.1	65th	19.06
489.1	70th	19.26
494.7	75th	19.47
501.0	80th	19.72
508.4	85th	20.01
518.1	90th	20.40
533.2	95th	20.99
543.7	97th	21.40
551.8	98th	21.73
565.5	99th	22.26

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
550.6	Mean	21.68
1.7	SE(Mean)	0.07
45.2	StDev	1.78
1.2	SE(StDev)	0.05
406.0	Minimum	15.98
688.0	Maximum	27.09
Coefficient of Variation		8.2%
Symmetry----Veta I		0.13
Kurtosis----Veta II		2.91
Sample Size		736

<b>Percentiles</b>		
Millimeters		Inches
453.2	1st	17.84
461.6	2nd	18.17
467.8	3rd	18.42
476.9	5th	18.78
492.3	10th	19.38
503.1	15th	19.81
511.9	20th	20.15
519.5	25th	20.45
526.4	30th	20.72
532.7	35th	20.97
538.6	40th	21.21
544.4	45th	21.43
550.1	50th	21.66
555.7	55th	21.88
561.4	60th	22.10
567.3	65th	22.34
573.5	70th	22.58
580.3	75th	22.85
587.9	80th	23.14
596.8	85th	23.49
608.3	90th	23.95
626.6	95th	24.67
639.4	97th	25.17
649.5	98th	25.57
666.8	99th	26.25

## (24) Forearm-Hand Length

The horizontal distance between the back of the tip of the right elbow to the tip of the right middle finger is measured with a beam caliper. The subject stands erect with the upper arms hanging at the sides and the right elbow flexed 90 degrees. The hand is held out straight with the palm facing inward.



**(24) Forearm-Hand Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
435.0	Mean	17.13
0.9	SE(Mean)	0.04
22.0	StDev	0.87
0.6	SE(StDev)	0.03
324.0	Minimum	12.76
515.0	Maximum	20.28
Coefficient of Variation		
		5.1%
Symmetry----Veta I		
		0.12
Kurtosis----Veta II		
		4.19
Sample Size		582

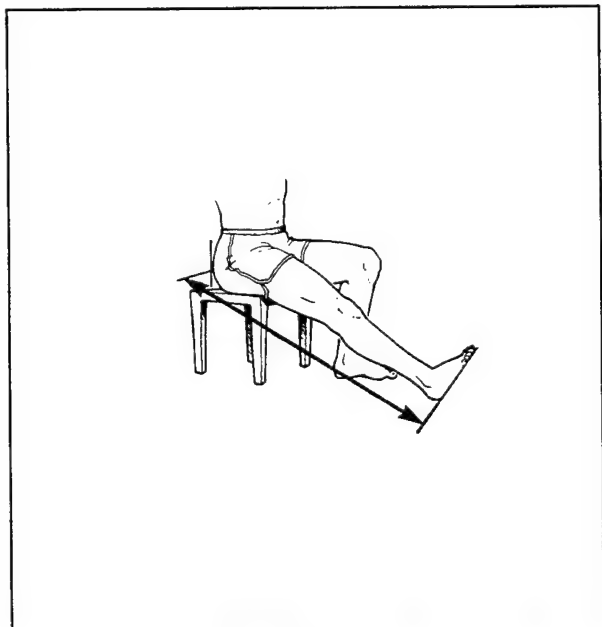
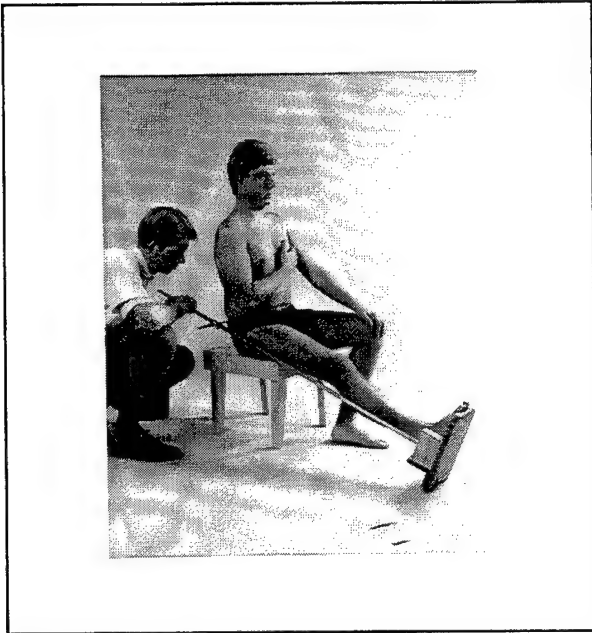
<b>Percentiles</b>		
Millimeters		Inches
388.1	1st	15.28
393.4	2nd	15.49
396.7	3rd	15.62
401.3	5th	15.80
408.4	10th	16.08
413.2	15th	16.27
417.1	20th	16.42
420.4	25th	16.55
423.4	30th	16.67
426.2	35th	16.78
428.9	40th	16.88
431.5	45th	16.99
434.1	50th	17.09
436.7	55th	17.19
439.3	60th	17.30
442.2	65th	17.41
445.2	70th	17.53
448.5	75th	17.66
452.2	80th	17.80
456.7	85th	17.98
462.6	90th	18.21
471.8	95th	18.58
478.2	97th	18.83
483.1	98th	19.02
491.2	99th	19.34

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
480.9	Mean	18.94
0.8	SE(Mean)	0.03
21.1	StDev	0.83
0.5	SE(StDev)	0.02
397.0	Minimum	15.63
570.0	Maximum	22.44
Coefficient of Variation		
		4.4%
Symmetry----Veta I		
		0.18
Kurtosis----Veta II		
		3.30
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
437.0	1st	17.21
440.6	2nd	17.35
443.3	3rd	17.45
447.2	5th	17.60
453.8	10th	17.87
458.6	15th	18.05
462.5	20th	18.21
466.0	25th	18.35
469.1	30th	18.47
472.1	35th	18.59
474.9	40th	18.70
477.7	45th	18.81
480.4	50th	18.91
483.1	55th	19.02
485.9	60th	19.13
488.7	65th	19.24
491.8	70th	19.36
495.0	75th	19.49
498.7	80th	19.63
502.9	85th	19.80
508.2	90th	20.01
516.2	95th	20.32
521.4	97th	20.53
525.3	98th	20.68
531.5	99th	20.93

## (25) Functional Leg Length

The straight-line distance between the plane of the bottom of the right foot with the leg extended and the back of the body of a seated subject is measured with an anthropometer passing over the trochanter landmark on the side of the hip. The subject sits erect on a stool 40.8 cm high. The right leg is extended and the foot is on the base plate of the anthropometer, which rests on the floor. The measurement is made from the footrest surface of the base plate.



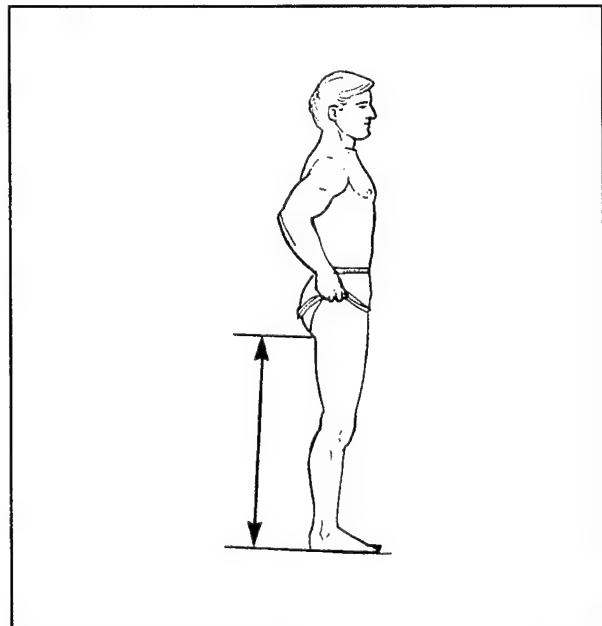
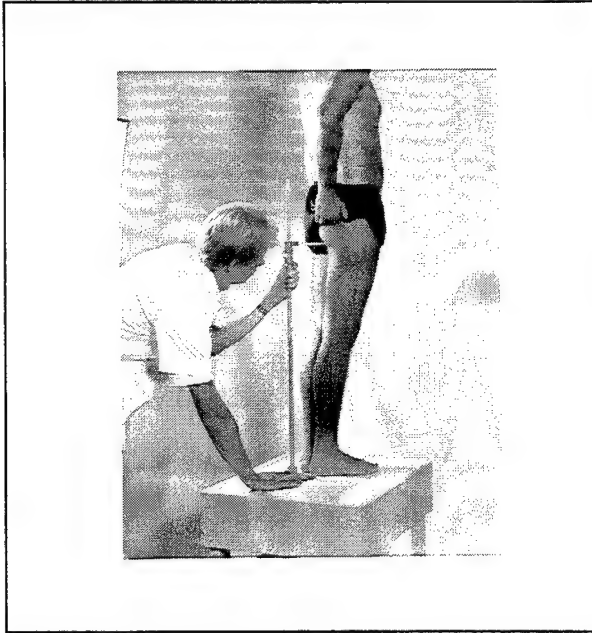
**(25) Functional Leg Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1004.8	Mean	39.56
2.2	SE(Mean)	0.08
52.0	StDev	2.05
1.5	SE(StDev)	0.06
819.0	Minimum	32.24
1166.0	Maximum	45.91
Coefficient of Variation		5.2%
Symmetry---Veta I		0.04
Kurtosis---Veta II		3.19
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
879.6	1st	34.63
897.5	2nd	35.34
907.9	3rd	35.75
921.2	5th	36.27
940.0	10th	37.01
952.1	15th	37.49
961.6	20th	37.86
969.7	25th	38.18
977.0	30th	38.46
983.8	35th	38.73
990.3	40th	38.99
996.7	45th	39.24
1003.1	50th	39.49
1009.6	55th	39.75
1016.2	60th	40.01
1023.2	65th	40.28
1030.6	70th	40.58
1038.8	75th	40.90
1048.0	80th	41.26
1058.8	85th	41.69
1072.5	90th	42.22
1092.5	95th	43.01
1104.9	97th	43.50
1113.7	98th	43.84
1126.3	99th	44.34

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1080.6	Mean	42.54
1.9	SE(Mean)	0.07
51.5	StDev	2.03
1.3	SE(StDev)	0.05
881.0	Minimum	34.69
1247.0	Maximum	49.09
Coefficient of Variation		4.8%
Symmetry---Veta I		0.04
Kurtosis---Veta II		2.98
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
965.4	1st	38.01
979.1	2nd	38.55
987.5	3rd	38.88
998.8	5th	39.32
1015.9	10th	40.00
1027.5	15th	40.45
1036.9	20th	40.82
1045.1	25th	41.14
1052.5	30th	41.44
1059.5	35th	41.71
1066.2	40th	41.98
1072.8	45th	42.24
1079.4	50th	42.50
1086.0	55th	42.76
1092.9	60th	43.03
1100.0	65th	43.31
1107.5	70th	43.60
1115.7	75th	43.93
1124.9	80th	44.29
1135.6	85th	44.71
1148.9	90th	45.23
1167.9	95th	45.98
1179.4	97th	46.43
1187.4	98th	46.75
1198.8	99th	47.20

## (26) Gluteal Furrow Height

The vertical distance between a standing surface and the lowest point of the gluteal furrow(s) under the right buttock is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet.



**(26) Gluteal Furrow Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
734.5	Mean	28.92
1.9	SE(Mean)	0.07
45.6	StDev	1.79
1.3	SE(StDev)	0.05
568.0	Minimum	22.36
885.0	Maximum	34.84
Coefficient of Variation		6.2%
Symmetry---Veta I		0.08
Kurtosis---Veta II		3.24
Sample Size		582

<b>Percentiles</b>		
Millimeters		Inches
627.5	1st	24.70
641.7	2nd	25.26
650.2	3rd	25.60
661.2	5th	26.03
677.5	10th	26.67
688.2	15th	27.09
696.5	20th	27.42
703.7	25th	27.71
710.2	30th	27.96
716.2	35th	28.20
721.9	40th	28.42
727.6	45th	28.64
733.2	50th	28.86
738.8	55th	29.09
744.6	60th	29.32
750.7	65th	29.55
757.2	70th	29.81
764.3	75th	30.09
772.4	80th	30.41
781.8	85th	30.78
794.0	90th	31.26
812.4	95th	31.98
824.3	97th	32.45
833.1	98th	32.80
846.7	99th	33.33

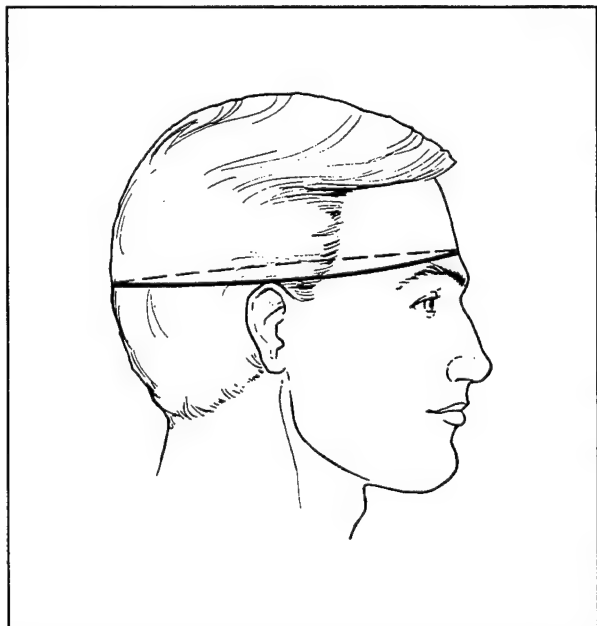
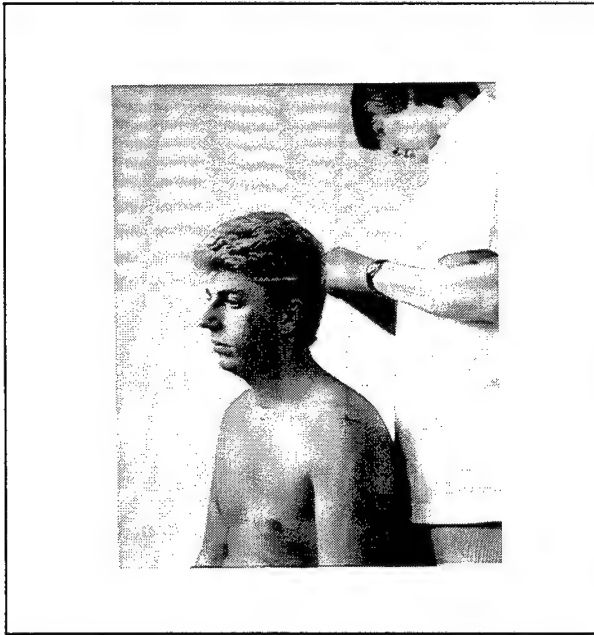
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
809.6	Mean	31.87
1.6	SE(Mean)	0.06
43.8	StDev	1.72
1.1	SE(StDev)	0.04
649.0	Minimum	25.55
932.0	Maximum	36.69
Coefficient of Variation		5.4%
Symmetry---Veta I		-0.04
Kurtosis---Veta II		2.96
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
704.3	1st	27.73
719.5	2nd	28.33
728.3	3rd	28.67
739.2	5th	29.10
754.8	10th	29.72
764.9	15th	30.11
772.8	20th	30.42
779.7	25th	30.70
785.9	30th	30.94
791.7	35th	31.17
797.4	40th	31.39
802.9	45th	31.61
808.5	50th	31.83
814.2	55th	32.05
820.0	60th	32.28
826.1	65th	32.52
832.5	70th	32.78
839.6	75th	33.06
847.5	80th	33.37
856.6	85th	33.72
867.7	90th	34.16
883.0	95th	34.76
891.5	97th	35.10
896.8	98th	35.31
903.1	99th	35.55



## **(27) Head Circumference**

The maximum circumference of the head above the attachment of the ears to the head is measured with a tape passing just above the ridges of the eyebrows and around the back of the head.



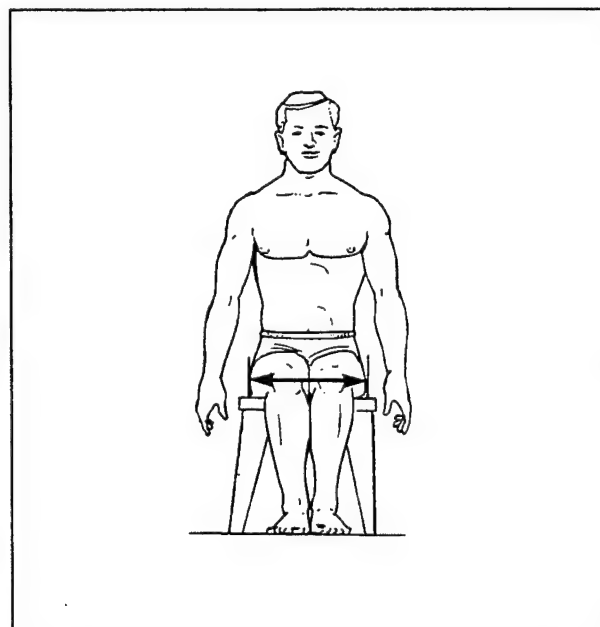
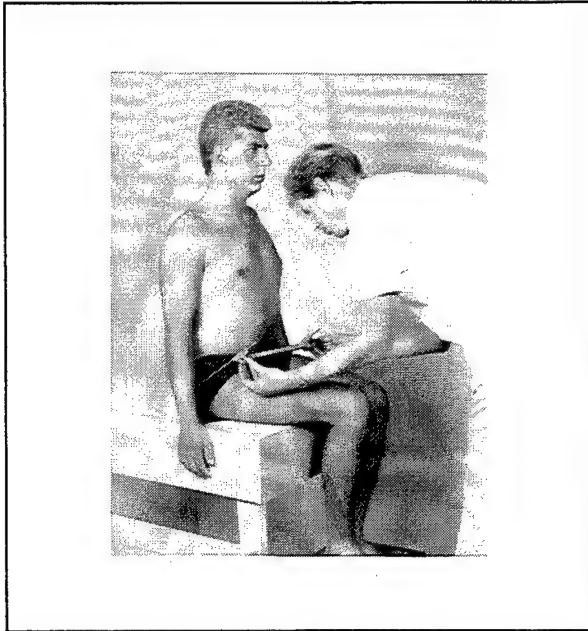
**(27) Head Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
544.5	Mean	21.44
0.6	SE(Mean)	0.02
14.1	StDev	0.56
0.4	SE(StDev)	0.02
505.0	Minimum	19.88
611.0	Maximum	24.06
Coefficient of Variation		2.6%
Symmetry---Veta I		0.13
Kurtosis---Veta II		3.59
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
510.5	1st	20.10
515.1	2nd	20.28
517.8	3rd	20.39
521.3	5th	20.53
526.6	10th	20.73
530.0	15th	20.87
532.7	20th	20.97
535.0	25th	21.06
537.1	30th	21.15
539.0	35th	21.22
540.8	40th	21.29
542.6	45th	21.36
544.4	50th	21.43
546.2	55th	21.50
548.0	60th	21.57
549.9	65th	21.65
551.9	70th	21.73
554.0	75th	21.81
556.5	80th	21.91
559.2	85th	22.02
562.7	90th	22.15
567.7	95th	22.35
570.8	97th	22.47
572.9	98th	22.56
576.0	99th	22.68

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
569.3	Mean	22.41
0.6	SE(Mean)	0.02
15.7	StDev	0.62
0.4	SE(StDev)	0.02
518.0	Minimum	20.39
633.0	Maximum	24.92
Coefficient of Variation		2.8%
Symmetry---Veta I		0.23
Kurtosis---Veta II		3.35
Sample Size		737
<b>Percentiles</b>		
Millimeters		Inches
533.7	1st	21.01
538.1	2nd	21.18
540.7	3rd	21.29
544.3	5th	21.43
549.6	10th	21.64
553.2	15th	21.78
556.0	20th	21.89
558.5	25th	21.99
560.7	30th	22.08
562.8	35th	22.16
564.8	40th	22.24
566.7	45th	22.31
568.7	50th	22.39
570.7	55th	22.47
572.7	60th	22.55
574.8	65th	22.63
577.0	70th	22.72
579.5	75th	22.82
582.3	80th	22.93
585.6	85th	23.05
589.8	90th	23.22
596.2	95th	23.47
600.3	97th	23.63
603.3	98th	23.75
608.1	99th	23.94

## **(28) Hip Breadth, Sitting**

The distance between the lateral points of the hips or thighs (whichever are broader) is measured with a beam caliper. The subject sits erect with the feet and knees together.



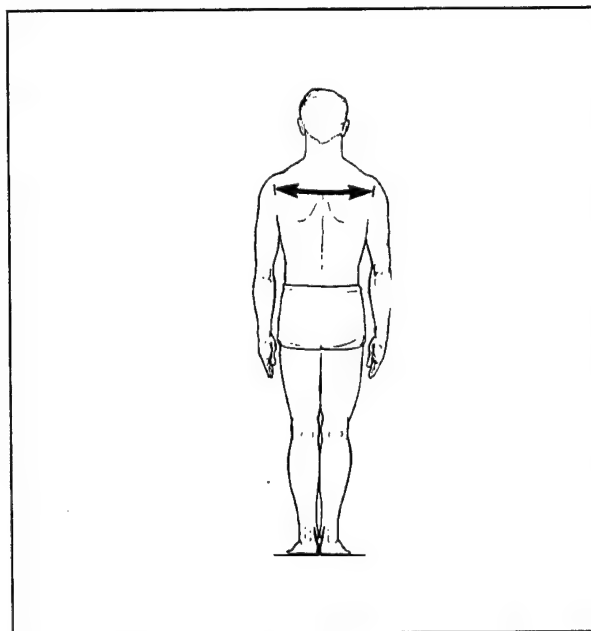
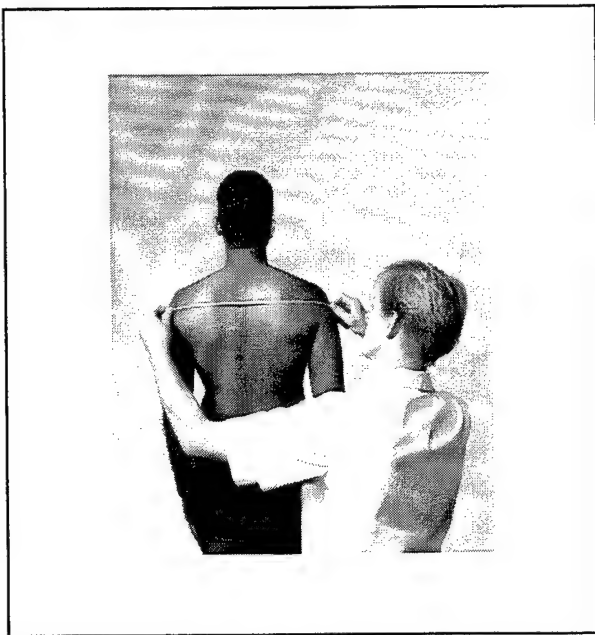
**(28) Hip Breadth, Sitting**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
391.9	Mean	15.43
1.2	SE(Mean)	0.05
28.8	StDev	1.14
0.8	SE(StDev)	0.03
310.0	Minimum	12.20
482.0	Maximum	18.98
Coefficient of Variation		7.4%
Symmetry---Veta I		0.29
Kurtosis---Veta II		2.94
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
327.6	1st	12.90
337.3	2nd	13.28
342.6	3rd	13.49
349.1	5th	13.74
357.8	10th	14.09
363.5	15th	14.31
367.9	20th	14.48
371.8	25th	14.64
375.5	30th	14.78
379.0	35th	14.92
382.4	40th	15.06
385.9	45th	15.19
389.4	50th	15.33
393.1	55th	15.48
396.9	60th	15.63
401.1	65th	15.79
405.6	70th	15.97
410.6	75th	16.16
416.3	80th	16.39
423.1	85th	16.66
431.7	90th	17.00
444.1	95th	17.48
451.5	97th	17.78
456.4	98th	17.97
462.9	99th	18.22

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
373.5	Mean	14.70
0.9	SE(Mean)	0.04
25.2	StDev	0.99
0.7	SE(StDev)	0.03
311.0	Minimum	12.24
484.0	Maximum	19.06
Coefficient of Variation		6.7%
Symmetry---Veta I		0.37
Kurtosis---Veta II		3.05
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
323.5	1st	12.74
327.9	2nd	12.91
330.8	3rd	13.02
335.0	5th	13.19
342.0	10th	13.46
347.1	15th	13.67
351.4	20th	13.83
355.2	25th	13.99
358.8	30th	14.13
362.2	35th	14.26
365.4	40th	14.39
368.7	45th	14.51
371.9	50th	14.64
375.2	55th	14.77
378.6	60th	14.91
382.2	65th	15.05
386.0	70th	15.20
390.2	75th	15.36
394.9	80th	15.55
400.3	85th	15.76
407.2	90th	16.03
417.2	95th	16.42
423.4	97th	16.67
427.9	98th	16.85
434.5	99th	17.11

## (29) Interscye II

The distance across the back between the right and left midscye landmarks is measured with a tape. The tape is held on the skin surface except where it spans the hollow of the back. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



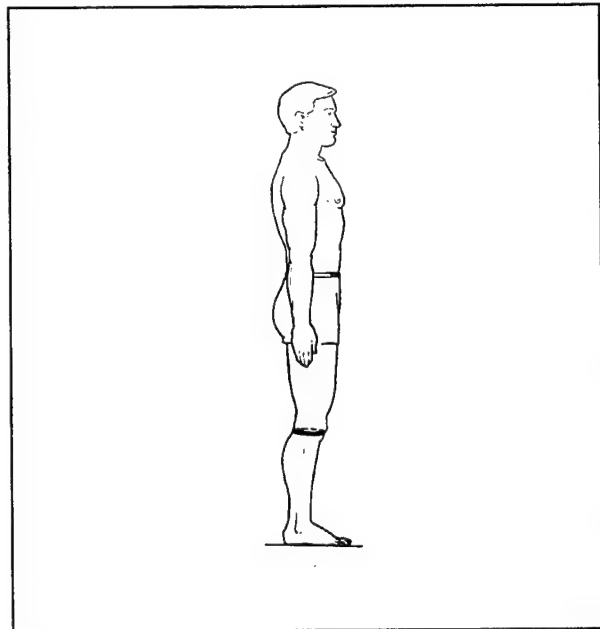
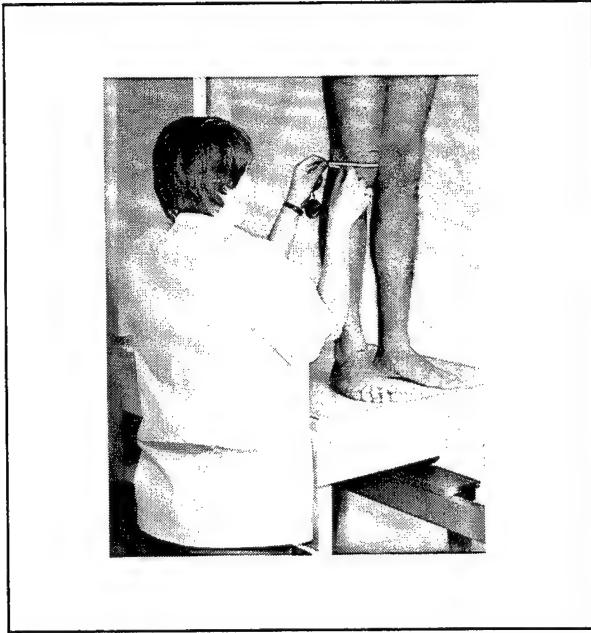
**(29) Interscye II**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
376.6	Mean	14.83
1.0	SE(Mean)	0.04
25.0	StDev	0.99
0.7	SE(StDev)	0.03
300.0	Minimum	11.81
470.0	Maximum	18.50
Coefficient of Variation		6.6%
Symmetry----Veta I		0.01
Kurtosis----Veta II		2.97
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
319.5	1st	12.58
325.2	2nd	12.80
329.1	3rd	12.96
334.6	5th	13.17
343.6	10th	13.53
349.8	15th	13.77
354.8	20th	13.97
359.2	25th	14.14
363.1	30th	14.30
366.8	35th	14.44
370.2	40th	14.58
373.6	45th	14.71
376.8	50th	14.84
380.1	55th	14.97
383.4	60th	15.09
386.8	65th	15.23
390.3	70th	15.37
394.1	75th	15.52
398.3	80th	15.68
403.1	85th	15.87
409.1	90th	16.11
417.7	95th	16.44
423.1	97th	16.66
427.1	98th	16.82
433.2	99th	17.06

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
409.1	Mean	16.11
1.0	SE(Mean)	0.04
27.1	StDev	1.07
0.7	SE(StDev)	0.03
329.0	Minimum	12.95
505.0	Maximum	19.88
Coefficient of Variation		6.6%
Symmetry----Veta I		0.10
Kurtosis----Veta II		3.14
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
348.9	1st	13.74
354.7	2nd	13.97
358.8	3rd	14.13
364.7	5th	14.36
374.3	10th	14.74
381.0	15th	15.00
386.4	20th	15.21
391.0	25th	15.39
395.1	30th	15.55
398.9	35th	15.70
402.4	40th	15.84
405.9	45th	15.98
409.2	50th	16.11
412.6	55th	16.24
415.9	60th	16.38
419.4	65th	16.51
423.0	70th	16.65
427.0	75th	16.81
431.4	80th	16.98
436.6	85th	17.19
443.3	90th	17.45
453.9	95th	17.87
461.4	97th	18.16
467.3	98th	18.40
477.4	99th	18.79

### **(30) Knee Circumference**

The horizontal circumference of the right knee at the level of the midpatella landmark at the center of the knee is measured with a tape. The subject stands erect with the feet about 10 cm apart and the weight distributed equally on both feet.



**(30) Knee Circumference**

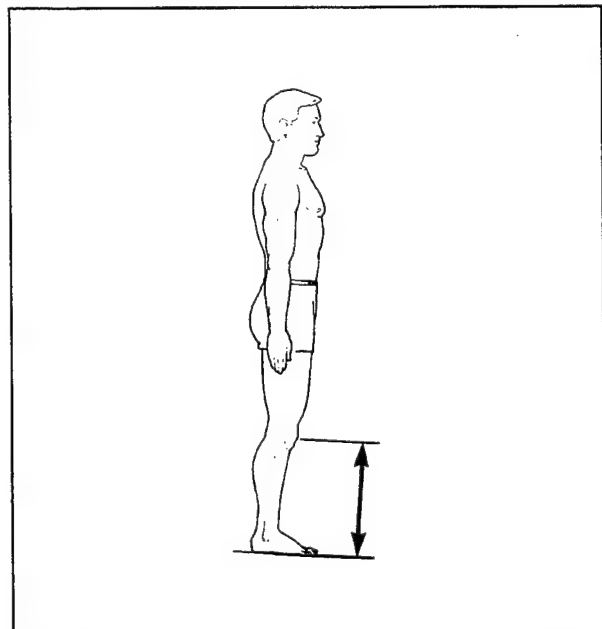
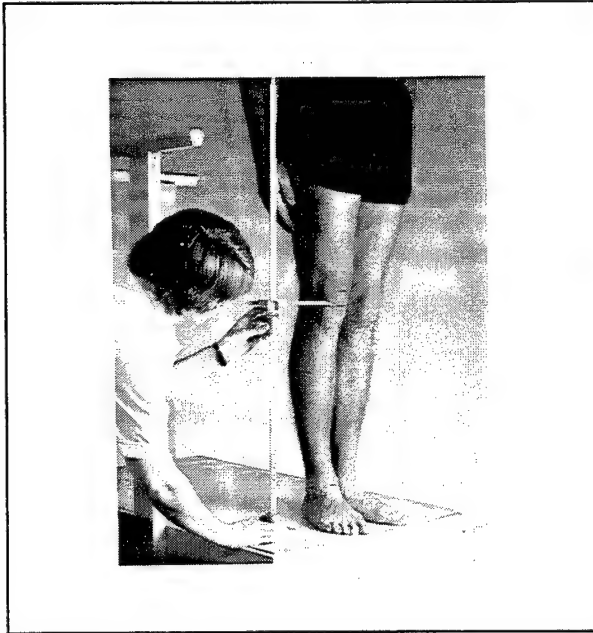
<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
366.1	Mean	14.42
1.0	SE(Mean)	0.04
24.5	StDev	0.96
0.7	SE(StDev)	0.03
303.0	Minimum	11.93
457.0	Maximum	17.99
Coefficient of Variation		6.7%
Symmetry----Veta I		0.39
Kurtosis----Veta II		3.37
Sample Size		580
<b>Percentiles</b>		
Millimeters		Inches
313.5	1st	12.34
319.6	2nd	12.58
323.4	3rd	12.73
328.5	5th	12.93
336.4	10th	13.25
341.8	15th	13.45
346.0	20th	13.62
349.6	25th	13.77
352.9	30th	13.90
356.0	35th	14.02
359.0	40th	14.13
361.8	45th	14.25
364.7	50th	14.36
367.7	55th	14.48
370.7	60th	14.59
373.9	65th	14.72
377.3	70th	14.85
381.1	75th	15.00
385.5	80th	15.18
390.7	85th	15.38
397.7	90th	15.66
408.9	95th	16.10
416.7	97th	16.41
422.8	98th	16.65
433.1	99th	17.05

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
389.7	Mean	15.34
0.8	SE(Mean)	0.03
23.0	StDev	0.90
0.6	SE(StDev)	0.02
333.0	Minimum	13.11
470.0	Maximum	18.50
Coefficient of Variation		5.9%
Symmetry----Veta I		0.23
Kurtosis----Veta II		2.94
Sample Size		732
<b>Percentiles</b>		
Millimeters		Inches
340.6	1st	13.41
345.1	2nd	13.58
348.1	3rd	13.71
352.6	5th	13.88
360.1	10th	14.18
365.4	15th	14.38
369.7	20th	14.55
373.5	25th	14.70
376.9	30th	14.84
380.1	35th	14.97
383.2	40th	15.09
386.2	45th	15.20
389.1	50th	15.32
392.1	55th	15.44
395.1	60th	15.56
398.2	65th	15.68
401.5	70th	15.81
405.1	75th	15.95
409.1	80th	16.11
413.7	85th	16.29
419.6	90th	16.52
428.4	95th	16.87
434.2	97th	17.09
438.5	98th	17.26
445.4	99th	17.54



### **(31) Knee Height, Midpatella**

The vertical distance between a standing surface and the midpatella landmark at the center of the right knee is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet.



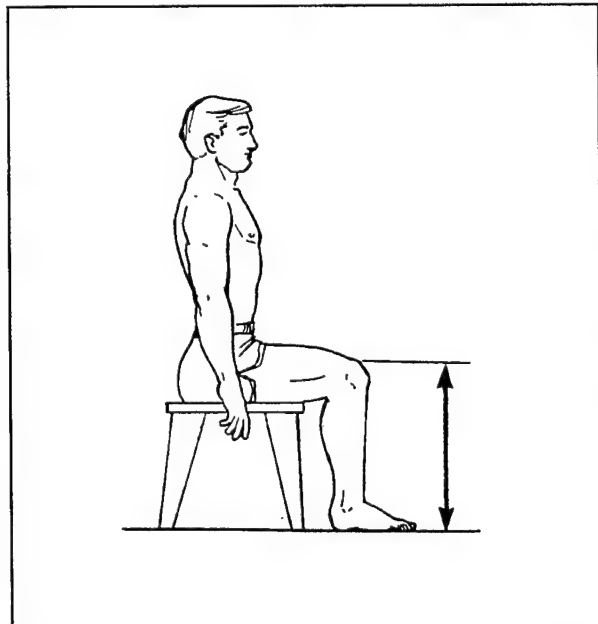
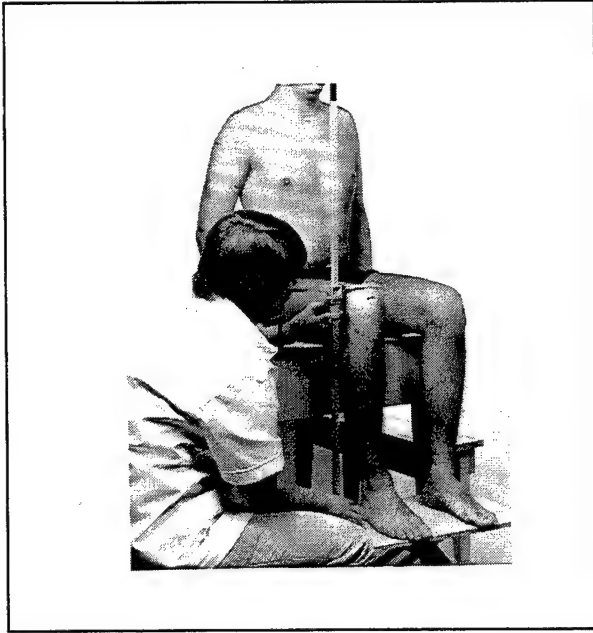
**(31) Knee Height, Midpatella**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
453.7	Mean	17.86
1.1	SE(Mean)	0.04
27.1	StDev	1.07
0.8	SE(StDev)	0.03
358.0	Minimum	14.09
536.0	Maximum	21.10
Coefficient of Variation		6.0%
Symmetry----Veta I		0.08
Kurtosis----Veta II		3.25
Sample Size		580
<b>Percentiles</b>		
Millimeters		Inches
391.7	1st	15.42
398.9	2nd	15.71
403.6	3rd	15.89
409.9	5th	16.14
419.6	10th	16.52
426.1	15th	16.78
431.2	20th	16.98
435.6	25th	17.15
439.6	30th	17.31
443.2	35th	17.45
446.6	40th	17.58
450.0	45th	17.71
453.2	50th	17.84
456.5	55th	17.97
459.9	60th	18.11
463.4	65th	18.24
467.0	70th	18.39
471.1	75th	18.55
475.7	80th	18.73
481.1	85th	18.94
488.2	90th	19.22
499.4	95th	19.66
507.2	97th	19.97
513.2	98th	20.20
523.4	99th	20.61

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
503.0	Mean	19.80
1.0	SE(Mean)	0.04
27.0	StDev	1.06
0.7	SE(StDev)	0.03
406.0	Minimum	15.98
577.0	Maximum	22.72
Coefficient of Variation		5.4%
Symmetry----Veta I		0.02
Kurtosis----Veta II		2.91
Sample Size		733
<b>Percentiles</b>		
Millimeters		Inches
440.1	1st	17.33
448.1	2nd	17.64
452.9	3rd	17.83
459.2	5th	18.08
468.7	10th	18.45
475.1	15th	18.70
480.1	20th	18.90
484.5	25th	19.07
488.4	30th	19.23
492.1	35th	19.37
495.6	40th	19.51
499.0	45th	19.65
502.5	50th	19.78
505.9	55th	19.92
509.5	60th	20.06
513.2	65th	20.20
517.1	70th	20.36
521.4	75th	20.53
526.3	80th	20.72
531.9	85th	20.94
538.9	90th	21.22
549.2	95th	21.62
555.6	97th	21.88
560.2	98th	22.05
566.8	99th	22.32

### **(32) Knee Height, Sitting**

The vertical distance between a footrest surface and the suprapatella landmark at the top of the right knee (located and drawn while the subject stands) is measured with an anthropometer. The subject sits with the thighs parallel, the knees flexed 90 degrees, and the feet in line with the thighs.



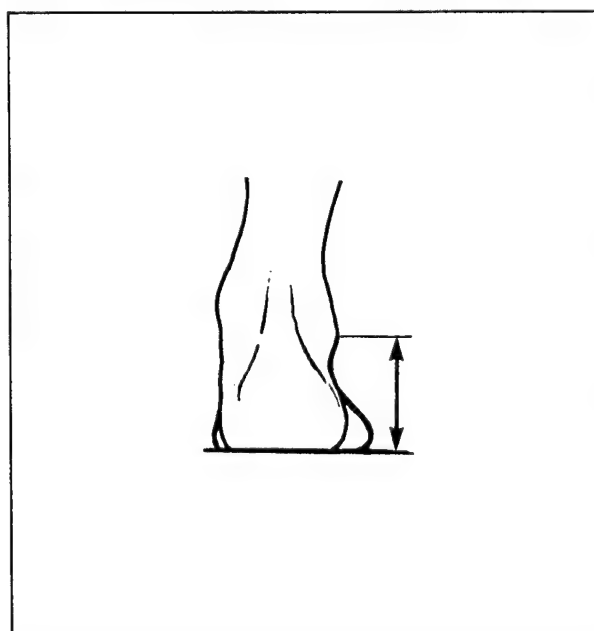
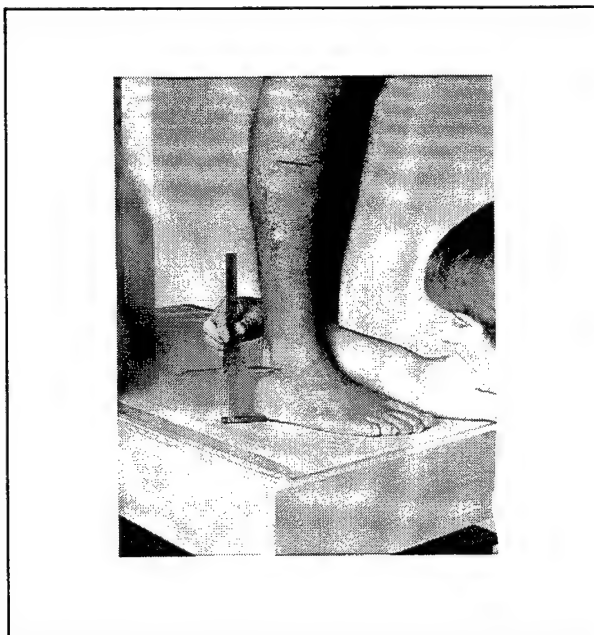
**(32) Knee Height, Sitting**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
510.7	Mean	20.11
1.1	SE(Mean)	0.04
27.6	StDev	1.08
0.8	SE(StDev)	0.03
406.0	Minimum	15.98
608.0	Maximum	23.94
Coefficient of Variation		5.4%
Symmetry----Veta I		0.15
Kurtosis----Veta II		3.39
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
449.7	1st	17.71
457.0	2nd	17.99
461.5	3rd	18.17
467.6	5th	18.41
476.7	10th	18.77
482.8	15th	19.01
487.7	20th	19.20
492.0	25th	19.37
495.8	30th	19.52
499.4	35th	19.66
502.9	40th	19.80
506.2	45th	19.93
509.6	50th	20.06
513.0	55th	20.20
516.5	60th	20.33
520.2	65th	20.48
524.1	70th	20.63
528.4	75th	20.80
533.2	80th	20.99
539.0	85th	21.22
546.4	90th	21.51
557.6	95th	21.95
564.9	97th	22.24
570.4	98th	22.46
579.0	99th	22.79

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
557.5	Mean	21.95
1.0	SE(Mean)	0.04
27.4	StDev	1.08
0.7	SE(StDev)	0.03
454.0	Minimum	17.87
636.0	Maximum	25.04
Coefficient of Variation		4.9%
Symmetry----Veta I		0.06
Kurtosis----Veta II		2.98
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
495.6	1st	19.51
503.0	2nd	19.80
507.6	3rd	19.98
513.7	5th	20.22
523.0	10th	20.59
529.3	15th	20.84
534.3	20th	21.03
538.7	25th	21.21
542.6	30th	21.36
546.3	35th	21.51
549.9	40th	21.65
553.3	45th	21.78
556.8	50th	21.92
560.3	55th	22.06
563.8	60th	22.20
567.6	65th	22.34
571.5	70th	22.50
575.8	75th	22.67
580.7	80th	22.86
586.3	85th	23.08
593.5	90th	23.37
604.0	95th	23.78
610.7	97th	24.04
615.5	98th	24.23
622.7	99th	24.52

### (33) Lateral Malleolus Height

The vertical distance between a standing surface and the lateral malleolus landmark on the outside of the right ankle is measured with a modified sliding caliper. The subject stands erect with the heels together and the weight distributed equally on both feet.



**(33) Lateral Malleolus Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
62.2	Mean	2.45
0.2	SE(Mean)	0.01
5.4	StDev	0.21
0.2	SE(StDev)	0.01
46.0	Minimum	1.81
83.0	Maximum	3.27
Coefficient of Variation		8.7%
Symmetry---Veta I		0.33
Kurtosis---Veta II		3.33
Sample Size		580

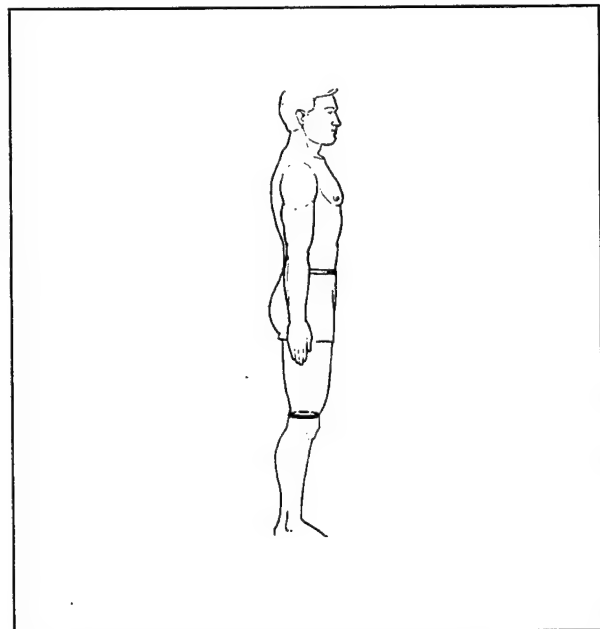
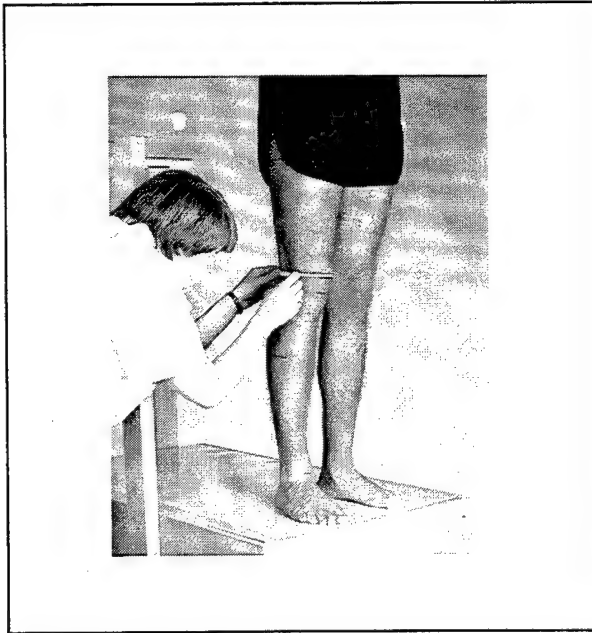
<b>Percentiles</b>		
Millimeters		Inches
51.2	1st	2.02
52.3	2nd	2.06
53.0	3rd	2.09
53.9	5th	2.12
55.5	10th	2.19
56.6	15th	2.23
57.6	20th	2.27
58.4	25th	2.30
59.1	30th	2.33
59.8	35th	2.36
60.5	40th	2.38
61.2	45th	2.41
61.9	50th	2.44
62.6	55th	2.46
63.3	60th	2.49
64.0	65th	2.52
64.8	70th	2.55
65.7	75th	2.59
66.7	80th	2.63
67.8	85th	2.67
69.3	90th	2.73
71.5	95th	2.82
72.9	97th	2.87
74.0	98th	2.91
75.6	99th	2.98

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
68.2	Mean	2.68
0.2	SE(Mean)	0.01
5.5	StDev	0.22
0.1	SE(StDev)	0.01
52.0	Minimum	2.05
88.0	Maximum	3.46
Coefficient of Variation		8.0%
Symmetry---Veta I		0.22
Kurtosis---Veta II		3.31
Sample Size		733

<b>Percentiles</b>		
Millimeters		Inches
55.0	1st	2.17
57.1	2nd	2.25
58.2	3rd	2.29
59.6	5th	2.35
61.6	10th	2.42
62.8	15th	2.47
63.7	20th	2.51
64.5	25th	2.54
65.3	30th	2.57
65.9	35th	2.60
66.6	40th	2.62
67.2	45th	2.65
67.9	50th	2.67
68.5	55th	2.70
69.2	60th	2.73
69.9	65th	2.75
70.7	70th	2.78
71.6	75th	2.82
72.6	80th	2.86
73.8	85th	2.90
75.3	90th	2.97
77.6	95th	3.06
79.1	97th	3.11
80.2	98th	3.16
81.8	99th	3.22

### **(34) Lower Thigh Circumference**

The horizontal circumference of the right thigh at the level of the suprapatella landmark at the top of the knee is measured with a tape. The subject stands erect with the feet about 10 cm apart and the weight distributed equally on both feet.



**(34) Lower Thigh Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
379.4	Mean	14.94
1.2	SE(Mean)	0.05
28.4	StDev	1.12
0.8	SE(StDev)	0.03
304.0	Minimum	11.97
475.0	Maximum	18.70
Coefficient of Variation		7.5%
Symmetry----Veta I		0.41
Kurtosis----Veta II		3.28
Sample Size		580

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
317.1	1st	12.49
325.7	2nd	12.82
330.7	3rd	13.02
337.0	5th	13.27
346.0	10th	13.62
351.7	15th	13.85
356.3	20th	14.03
360.2	25th	14.18
363.8	30th	14.32
367.1	35th	14.45
370.4	40th	14.58
373.6	45th	14.71
376.9	50th	14.84
380.3	55th	14.97
383.8	60th	15.11
387.6	65th	15.26
391.7	70th	15.42
396.3	75th	15.60
401.7	80th	15.81
408.2	85th	16.07
416.9	90th	16.41
430.6	95th	16.95
440.1	97th	17.32
447.2	98th	17.61
458.9	99th	18.07

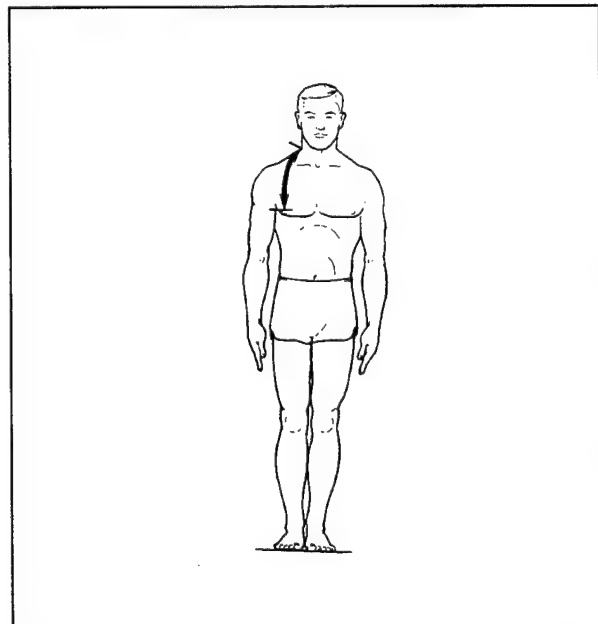
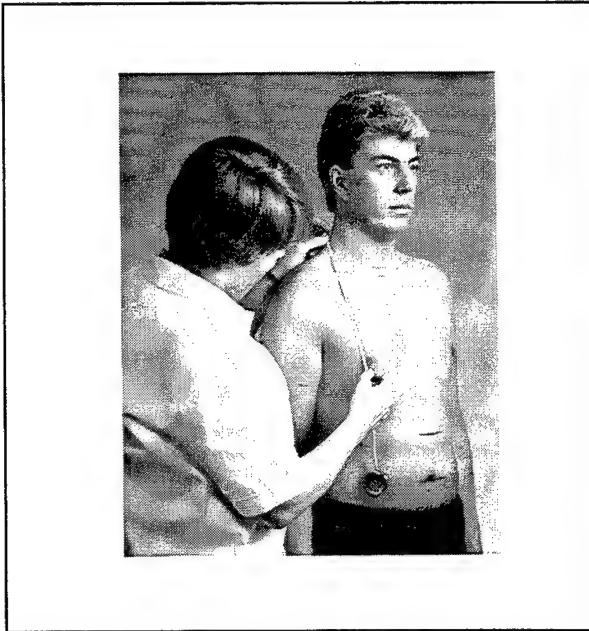
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
396.5	Mean	15.61
1.0	SE(Mean)	0.04
28.2	StDev	1.11
0.7	SE(StDev)	0.03
329.0	Minimum	12.95
490.0	Maximum	19.29
Coefficient of Variation		7.1%
Symmetry----Veta I		0.20
Kurtosis----Veta II		2.99
Sample Size		733

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
333.8	1st	13.14
340.2	2nd	13.39
344.5	3rd	13.56
350.5	5th	13.80
360.2	10th	14.18
366.9	15th	14.45
372.3	20th	14.66
377.0	25th	14.84
381.3	30th	15.01
385.2	35th	15.16
388.9	40th	15.31
392.5	45th	15.45
396.1	50th	15.59
399.7	55th	15.73
403.3	60th	15.88
407.0	65th	16.03
411.0	70th	16.18
415.3	75th	16.35
420.2	80th	16.54
425.9	85th	16.77
433.2	90th	17.06
444.4	95th	17.50
452.0	97th	17.79
457.7	98th	18.02
467.2	99th	18.39



### (35) Neck-Bustpoint/Thelion Length

The distance between the trapezius landmark at the right side of the neck and the right bustpoint landmark on women or the right nipple (thelion) on men is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



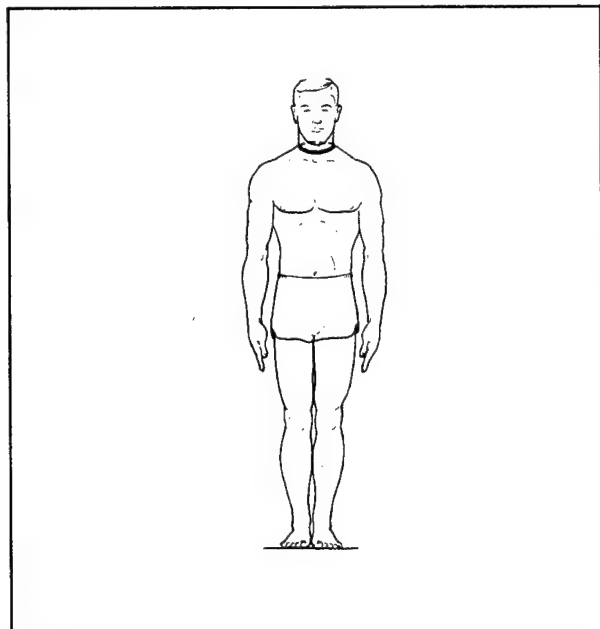
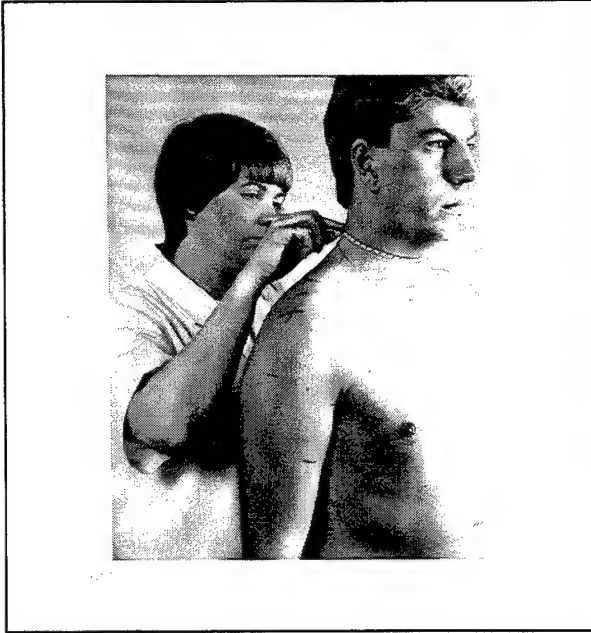
**(35) Neck-Bustpoint / Thelion Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
269.1	Mean	10.60
0.9	SE(Mean)	0.03
21.1	StDev	0.83
0.6	SE(StDev)	0.02
210.0	Minimum	8.27
347.0	Maximum	13.66
Coefficient of Variation		7.9%
Symmetry----Veta I		0.27
Kurtosis----Veta II		3.14
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
223.3	1st	8.79
228.6	2nd	9.00
231.9	3rd	9.13
236.3	5th	9.30
243.1	10th	9.57
247.6	15th	9.75
251.3	20th	9.89
254.5	25th	10.02
257.5	30th	10.14
260.2	35th	10.24
262.8	40th	10.35
265.4	45th	10.45
268.0	50th	10.55
270.7	55th	10.66
273.4	60th	10.76
276.3	65th	10.88
279.3	70th	11.00
282.7	75th	11.13
286.6	80th	11.28
291.1	85th	11.46
296.9	90th	11.69
305.7	95th	12.04
311.5	97th	12.26
315.7	98th	12.43
322.4	99th	12.69

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
278.7	Mean	10.97
0.7	SE(Mean)	0.03
18.0	StDev	0.71
0.5	SE(StDev)	0.02
226.0	Minimum	8.90
352.0	Maximum	13.86
Coefficient of Variation		6.5%
Symmetry----Veta I		0.31
Kurtosis----Veta II		3.32
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
242.6	1st	9.55
245.1	2nd	9.65
247.1	3rd	9.73
250.3	5th	9.85
255.8	10th	10.07
259.8	15th	10.23
263.1	20th	10.36
266.1	25th	10.47
268.7	30th	10.58
271.2	35th	10.68
273.5	40th	10.77
275.8	45th	10.86
278.0	50th	10.95
280.3	55th	11.04
282.6	60th	11.13
285.0	65th	11.22
287.5	70th	11.32
290.2	75th	11.43
293.3	80th	11.55
297.0	85th	11.69
301.8	90th	11.88
309.5	95th	12.18
314.9	97th	12.40
319.2	98th	12.57
326.6	99th	12.86

### **(36) Neck Circumference**

The circumference of the neck at the level of the infrathyroid landmark (Adam's apple) is measured with a tape. The plane of the measurement is perpendicular to the long axis of the neck. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed.



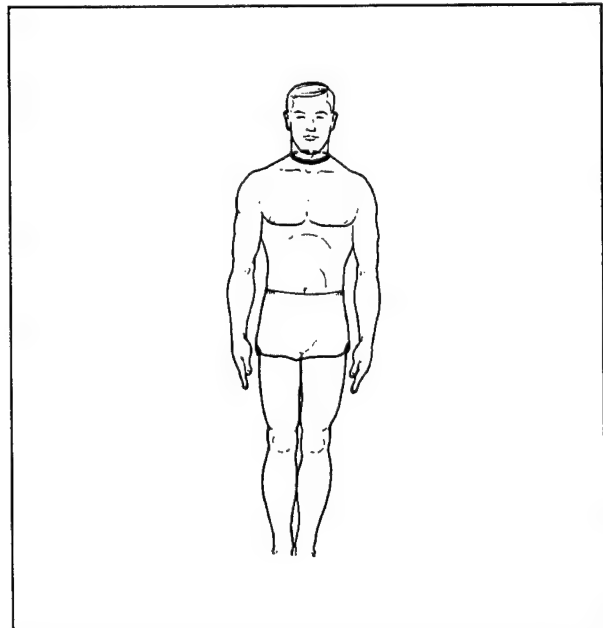
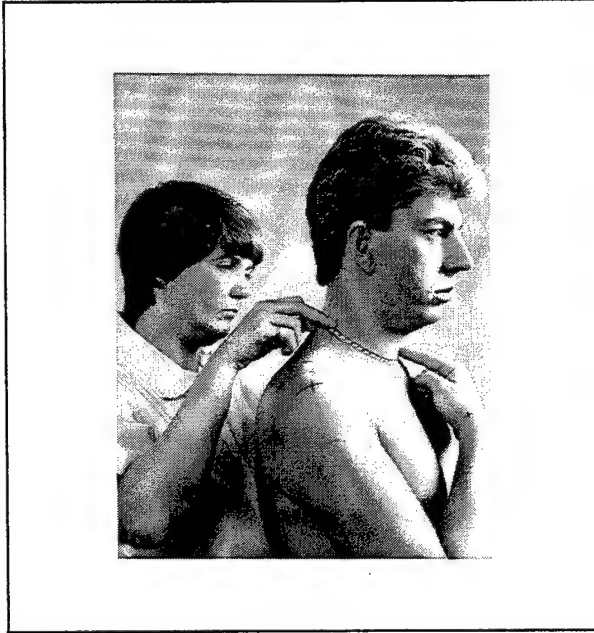
**(36) Neck Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
314.9	Mean	12.40
0.6	SE(Mean)	0.03
15.5	StDev	0.61
0.5	SE(StDev)	0.02
277.0	Minimum	10.91
371.0	Maximum	14.61
Coefficient of Variation		4.9%
Symmetry----Veta I		0.54
Kurtosis----Veta II		3.28
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
284.3	1st	11.19
287.9	2nd	11.34
290.0	3rd	11.42
292.7	5th	11.52
296.7	10th	11.68
299.4	15th	11.79
301.6	20th	11.87
303.6	25th	11.95
305.5	30th	12.03
307.4	35th	12.10
309.2	40th	12.17
311.0	45th	12.24
312.9	50th	12.32
314.9	55th	12.40
317.0	60th	12.48
319.2	65th	12.57
321.7	70th	12.66
324.4	75th	12.77
327.6	80th	12.90
331.4	85th	13.05
336.3	90th	13.24
343.7	95th	13.53
348.4	97th	13.72
351.7	98th	13.85
356.6	99th	14.04

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
382.0	Mean	15.04
0.7	SE(Mean)	0.03
19.9	StDev	0.78
0.5	SE(StDev)	0.02
317.0	Minimum	12.48
468.0	Maximum	18.43
Coefficient of Variation		5.2%
Symmetry----Veta I		0.35
Kurtosis----Veta II		3.61
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
339.7	1st	13.37
344.4	2nd	13.56
347.3	3rd	13.67
351.4	5th	13.83
357.6	10th	14.08
362.0	15th	14.25
365.4	20th	14.39
368.4	25th	14.51
371.2	30th	14.61
373.8	35th	14.72
376.2	40th	14.81
378.7	45th	14.91
381.1	50th	15.00
383.5	55th	15.10
386.1	60th	15.20
388.7	65th	15.30
391.5	70th	15.41
394.6	75th	15.54
398.2	80th	15.68
402.3	85th	15.84
407.7	90th	16.05
416.0	95th	16.38
421.5	97th	16.59
425.6	98th	16.76
432.2	99th	17.02

### **(37) Neck Circumference, Base**

The circumference of the base of the neck is measured by a tape passing over the drawn lateral and anterior neck landmarks. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed.



**(37) Neck Circumference, Base**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
345.7	Mean	13.61
0.7	SE(Mean)	0.03
16.5	StDev	0.65
0.5	SE(StDev)	0.02
308.0	Minimum	12.13
398.0	Maximum	15.67
Coefficient of Variation		4.8%
Symmetry---Veta I		0.43
Kurtosis---Veta II		3.14
Sample Size		582

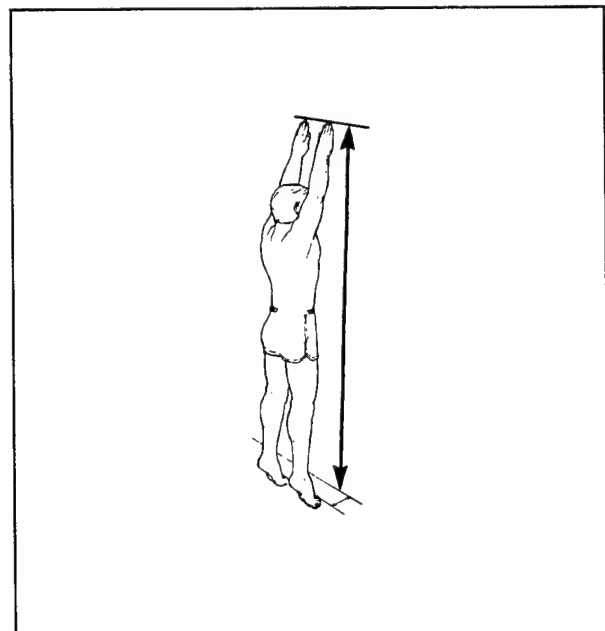
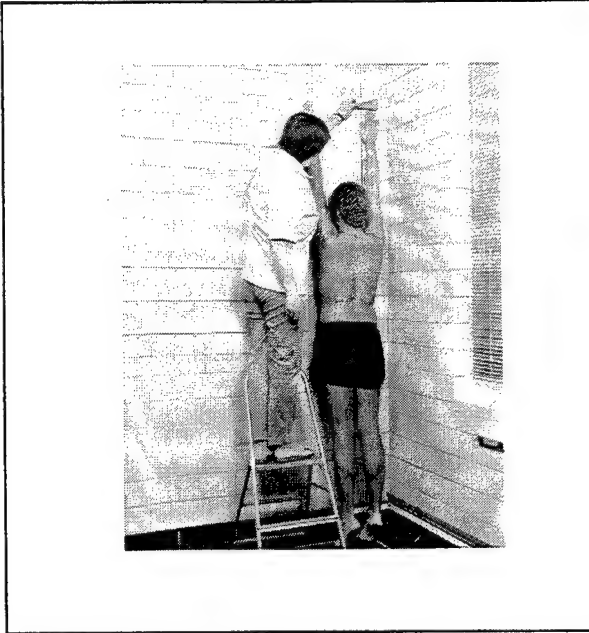
<b>Percentiles</b>		
Millimeters		Inches
310.8	1st	12.24
315.0	2nd	12.40
317.5	3rd	12.50
320.7	5th	12.63
325.6	10th	12.82
328.9	15th	12.95
331.6	20th	13.05
334.0	25th	13.15
336.1	30th	13.23
338.2	35th	13.31
340.2	40th	13.39
342.2	45th	13.47
344.3	50th	13.55
346.4	55th	13.64
348.5	60th	13.72
350.9	65th	13.81
353.4	70th	13.91
356.2	75th	14.02
359.4	80th	14.15
363.2	85th	14.30
368.3	90th	14.50
375.9	95th	14.80
380.8	97th	14.99
384.5	98th	15.14
390.1	99th	15.36

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
410.0	Mean	16.14
0.8	SE(Mean)	0.03
21.2	StDev	0.83
0.6	SE(StDev)	0.02
345.0	Minimum	13.58
505.0	Maximum	19.88
Coefficient of Variation		5.2%
Symmetry---Veta I		0.30
Kurtosis---Veta II		3.63
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
361.7	1st	14.24
367.5	2nd	14.47
371.2	3rd	14.61
376.1	5th	14.81
383.6	10th	15.10
388.6	15th	15.30
392.5	20th	15.45
395.9	25th	15.59
398.9	30th	15.71
401.7	35th	15.82
404.4	40th	15.92
406.9	45th	16.02
409.5	50th	16.12
412.0	55th	16.22
414.6	60th	16.32
417.3	65th	16.43
420.2	70th	16.54
423.4	75th	16.67
427.0	80th	16.81
431.3	85th	16.98
436.9	90th	17.20
445.8	95th	17.55
451.9	97th	17.79
456.7	98th	17.98
464.6	99th	18.29

### (38) Overhead Fingertip Reach, Extended

The vertical distance between a standing surface and the tip of the right middle finger when the arm is extended overhead as high as possible is measured on a wall scale. The subject stands on his/her toes facing a wall-mounted scale with both arms parallel and extended overhead as high as possible. The toes are 20 cm from the wall and the feet are about 10 cm apart. The palms of the hands rest on the scale. A block is placed against the tip of the finger to establish the measurement. The measurement is taken at the maximum point of quiet respiration.



**(38) Overhead Fingertip Reach, Extended**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
2144.3	Mean	84.42
4.1	SE(Mean)	0.16
99.4	StDev	3.91
2.9	SE(StDev)	0.11
1820.0	Minimum	71.65
2464.0	Maximum	97.01
Coefficient of Variation		4.6%
Symmetry---Veta I		0.02
Kurtosis---Veta II		3.17
Sample Size		580

<b>Percentiles</b>		
Millimeters		Inches
1904.1	1st	74.97
1938.3	2nd	76.31
1958.3	3rd	77.10
1983.8	5th	78.10
2020.5	10th	79.55
2044.1	15th	80.48
2062.4	20th	81.20
2078.3	25th	81.82
2092.4	30th	82.38
2105.5	35th	82.89
2118.1	40th	83.39
2130.3	45th	83.87
2142.5	50th	84.35
2154.9	55th	84.84
2167.5	60th	85.33
2180.7	65th	85.85
2194.7	70th	86.41
2210.0	75th	87.01
2227.3	80th	87.69
2247.4	85th	88.48
2272.7	90th	89.48
2309.5	95th	90.93
2332.3	97th	91.82
2348.3	98th	92.45
2371.4	99th	93.36

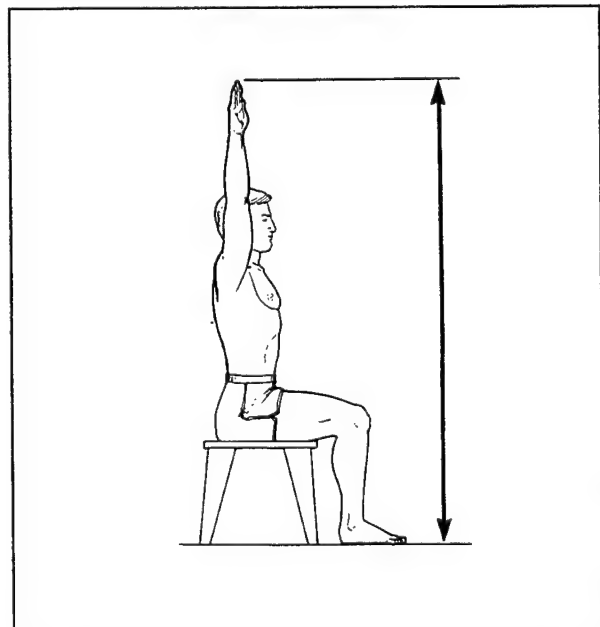
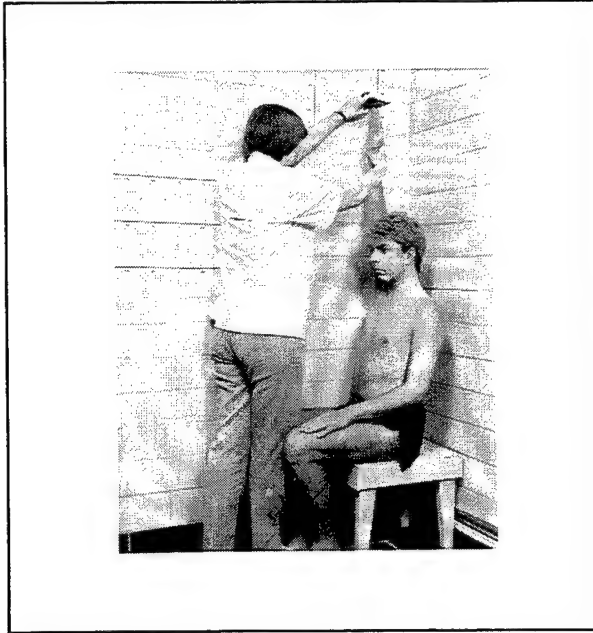
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
2329.5	Mean	91.71
3.7	SE(Mean)	0.15
100.3	StDev	3.95
2.6	SE(StDev)	0.10
1917.0	Minimum	75.47
2642.0	Maximum	104.02
Coefficient of Variation		4.3%
Symmetry---Veta I		0.01
Kurtosis---Veta II		3.03
Sample Size		733

<b>Percentiles</b>		
Millimeters		Inches
2096.7	1st	82.55
2129.0	2nd	83.82
2147.6	3rd	84.55
2171.3	5th	85.49
2205.6	10th	86.83
2228.0	15th	87.72
2245.7	20th	88.41
2261.2	25th	89.02
2275.3	30th	89.58
2288.5	35th	90.10
2301.3	40th	90.60
2313.9	45th	91.10
2326.6	50th	91.60
2339.5	55th	92.11
2352.8	60th	92.63
2366.7	65th	93.18
2381.6	70th	93.76
2397.8	75th	94.40
2416.1	80th	95.12
2437.2	85th	95.95
2463.4	90th	96.98
2500.0	95th	98.42
2521.2	97th	99.26
2535.0	98th	99.80
2552.8	99th	100.50



### (39) Overhead Fingertip Reach, Sitting

The vertical distance between a sitting surface and the tip of the right middle finger of a seated subject whose arm is extended overhead is measured on a wall scale. The subject sits erect on a flat surface 40.8 cm high with the right arm and hand extended vertically overhead as far as possible and the palm of the hand facing forward. Neither the back nor the arm touches a wall. A block placed at the tip of the middle finger spans the distance between the finger and the wall and establishes the measurement on the wall scale. The measurement is made at the maximum point of quiet respiration.



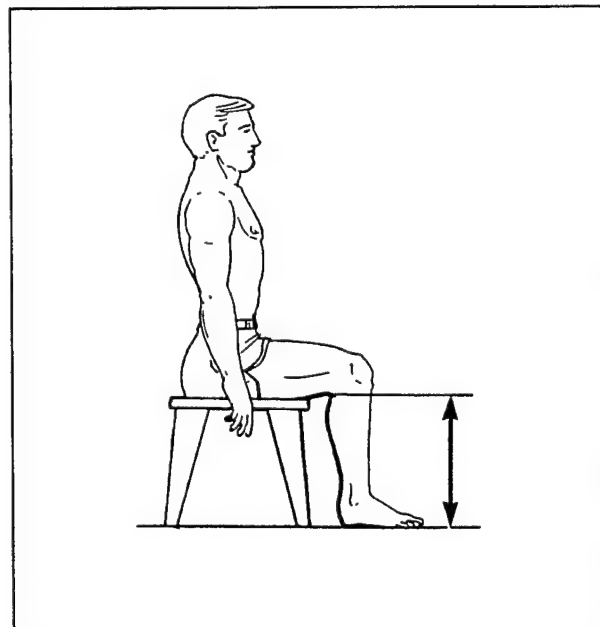
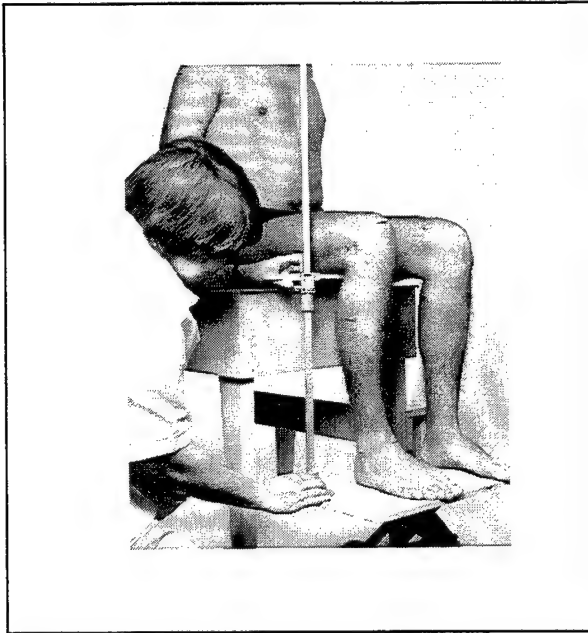
**(39) Overhead Fingertip Reach, Sitting**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1323.2	Mean	52.09
2.4	SE(Mean)	0.09
56.8	StDev	2.24
1.7	SE(StDev)	0.07
1129.0	Minimum	44.45
1490.0	Maximum	58.66
Coefficient of Variation		4.3%
Symmetry---Veta I		-0.01
Kurtosis---Veta II		3.04
Sample Size		580
<b>Percentiles</b>		
Millimeters		Inches
1189.6	1st	46.84
1206.7	2nd	47.51
1217.1	3rd	47.92
1231.0	5th	48.46
1251.7	10th	49.28
1265.3	15th	49.82
1276.1	20th	50.24
1285.3	25th	50.60
1293.6	30th	50.93
1301.2	35th	51.23
1308.5	40th	51.52
1315.6	45th	51.79
1322.6	50th	52.07
1329.6	55th	52.35
1336.8	60th	52.63
1344.2	65th	52.92
1352.1	70th	53.23
1360.7	75th	53.57
1370.4	80th	53.95
1381.7	85th	54.40
1396.0	90th	54.96
1417.4	95th	55.80
1431.3	97th	56.35
1441.4	98th	56.75
1457.2	99th	57.37

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1438.0	Mean	56.61
2.2	SE(Mean)	0.09
59.2	StDev	2.33
1.5	SE(StDev)	0.06
1164.0	Minimum	45.83
1633.0	Maximum	64.29
Coefficient of Variation		4.1%
Symmetry---Veta I		-0.01
Kurtosis---Veta II		3.44
Sample Size		733
<b>Percentiles</b>		
Millimeters		Inches
1303.5	1st	51.32
1319.3	2nd	51.94
1329.3	3rd	52.33
1342.7	5th	52.86
1363.2	10th	53.67
1377.0	15th	54.21
1388.0	20th	54.65
1397.6	25th	55.02
1406.2	30th	55.36
1414.2	35th	55.68
1421.8	40th	55.98
1429.2	45th	56.27
1436.6	50th	56.56
1444.0	55th	56.85
1451.6	60th	57.15
1459.4	65th	57.46
1467.8	70th	57.79
1476.9	75th	58.14
1487.1	80th	58.55
1498.9	85th	59.01
1514.0	90th	59.61
1536.4	95th	60.49
1550.9	97th	61.06
1561.4	98th	61.47
1577.8	99th	62.12

## (40) Popliteal Height

The vertical distance from a footrest surface to the back of the right knee (the popliteal fossa at the dorsal juncture of the right calf and thigh) is measured with an anthropometer. The subject sits with the thighs parallel, the feet in line with the thighs, and the knees flexed 90 degrees.



**(40) Popliteal Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
384.9	Mean	15.15
1.0	SE(Mean)	0.04
24.4	StDev	0.96
0.7	SE(StDev)	0.03
299.0	Minimum	11.77
461.0	Maximum	18.15
Coefficient of Variation		6.3%
Symmetry----Veta I		0.11
Kurtosis----Veta II		3.12
Sample Size		582

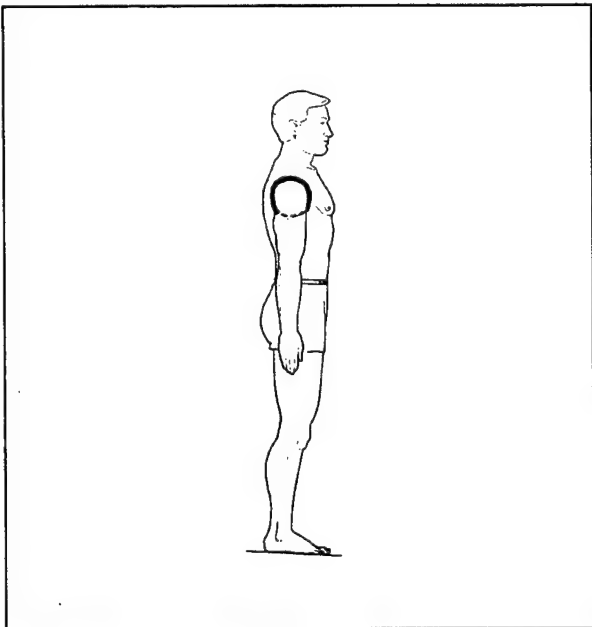
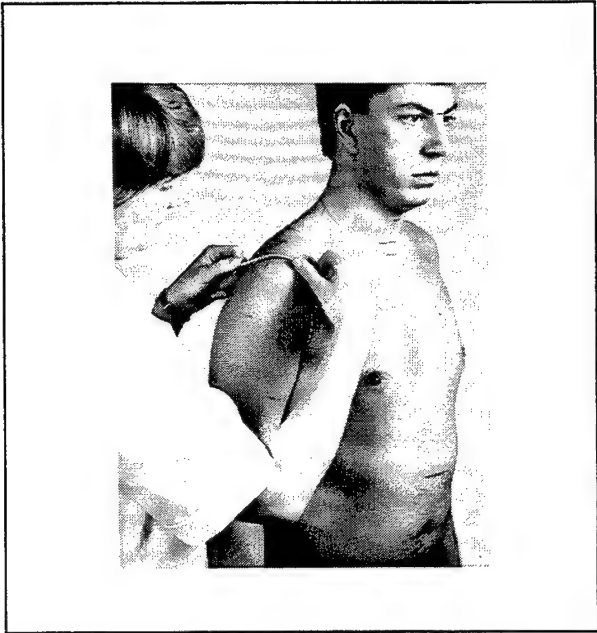
<b>Percentiles</b>		
Millimeters		Inches
331.3	1st	13.04
337.4	2nd	13.28
341.2	3rd	13.43
346.3	5th	13.64
354.3	10th	13.95
359.8	15th	14.17
364.2	20th	14.34
368.0	25th	14.49
371.5	30th	14.63
374.8	35th	14.76
377.9	40th	14.88
381.0	45th	15.00
384.1	50th	15.12
387.2	55th	15.24
390.4	60th	15.37
393.7	65th	15.50
397.2	70th	15.64
401.1	75th	15.79
405.5	80th	15.96
410.6	85th	16.17
417.1	90th	16.42
426.7	95th	16.80
433.0	97th	17.05
437.5	98th	17.22
444.4	99th	17.50

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
431.4	Mean	16.99
0.9	SE(Mean)	0.03
23.9	StDev	0.94
0.6	SE(StDev)	0.02
338.0	Minimum	13.31
500.0	Maximum	19.69
Coefficient of Variation		5.5%
Symmetry----Veta I		0.01
Kurtosis----Veta II		3.15
Sample Size		736

<b>Percentiles</b>		
Millimeters		Inches
375.4	1st	14.78
382.7	2nd	15.07
387.1	3rd	15.24
392.9	5th	15.47
401.5	10th	15.81
407.2	15th	16.03
411.6	20th	16.20
415.4	25th	16.35
418.8	30th	16.49
422.0	35th	16.61
425.0	40th	16.73
428.0	45th	16.85
430.9	50th	16.96
433.9	55th	17.08
436.9	60th	17.20
440.0	65th	17.32
443.4	70th	17.46
447.1	75th	17.60
451.2	80th	17.77
456.1	85th	17.96
462.4	90th	18.21
471.9	95th	18.58
478.1	97th	18.82
482.7	98th	19.00
489.9	99th	19.29

## **(41) Scye Circumference**

The vertical circumference of the right upper arm (scye) is measured with a tape passing through the armpit and over the acromion landmark on the tip of the shoulder. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed with the palms facing the thighs.



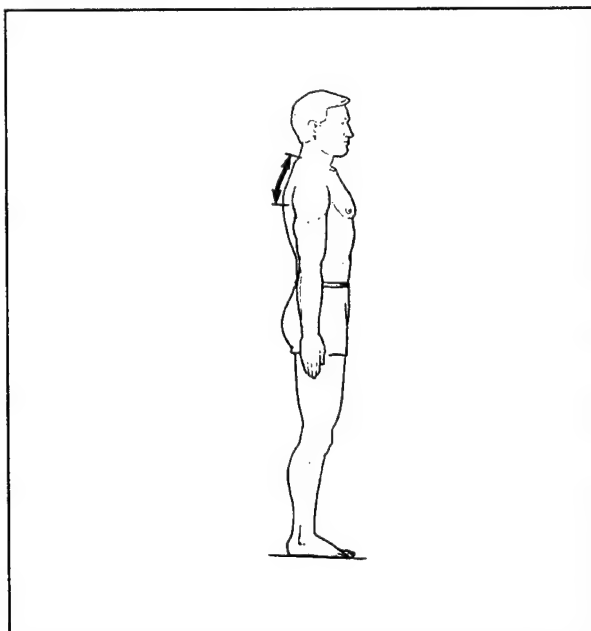
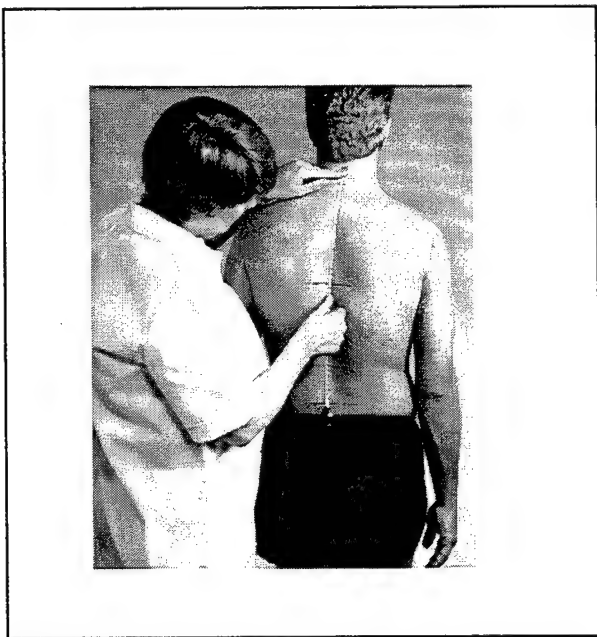
**(41) Scye Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
374.4	Mean	14.74
1.0	SE(Mean)	0.04
23.8	StDev	0.94
0.7	SE(StDev)	0.03
312.0	Minimum	12.28
462.0	Maximum	18.19
Coefficient of Variation		6.4%
Symmetry----Veta I		0.46
Kurtosis----Veta II		3.17
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
326.9	1st	12.87
331.7	2nd	13.06
334.7	3rd	13.18
338.9	5th	13.34
345.5	10th	13.60
350.2	15th	13.79
354.0	20th	13.94
357.5	25th	14.07
360.6	30th	14.20
363.7	35th	14.32
366.6	40th	14.43
369.5	45th	14.55
372.5	50th	14.66
375.5	55th	14.78
378.7	60th	14.91
382.0	65th	15.04
385.6	70th	15.18
389.6	75th	15.34
394.1	80th	15.52
399.6	85th	15.73
406.6	90th	16.01
417.4	95th	16.43
424.5	97th	16.71
429.8	98th	16.92
438.1	99th	17.25

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
450.5	Mean	17.73
1.0	SE(Mean)	0.04
27.6	StDev	1.09
0.7	SE(StDev)	0.03
368.0	Minimum	14.49
543.0	Maximum	21.38
Coefficient of Variation		6.1%
Symmetry----Veta I		0.19
Kurtosis----Veta II		3.03
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
390.1	1st	15.36
397.0	2nd	15.63
401.3	3rd	15.80
407.1	5th	16.03
416.1	10th	16.38
422.2	15th	16.62
427.1	20th	16.81
431.4	25th	16.98
435.3	30th	17.14
438.9	35th	17.28
442.5	40th	17.42
445.9	45th	17.56
449.4	50th	17.69
452.9	55th	17.83
456.5	60th	17.97
460.3	65th	18.12
464.3	70th	18.28
468.8	75th	18.46
473.8	80th	18.65
479.6	85th	18.88
487.1	90th	19.18
498.1	95th	19.61
505.2	97th	19.89
510.4	98th	20.09
518.3	99th	20.40

## (42) Scye Depth

The surface distance along the spine between the cervicale landmark on the base of the back of the neck and the scye-level-at-midspine landmark is measured with a tape. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed.



**(42) Scye Depth**

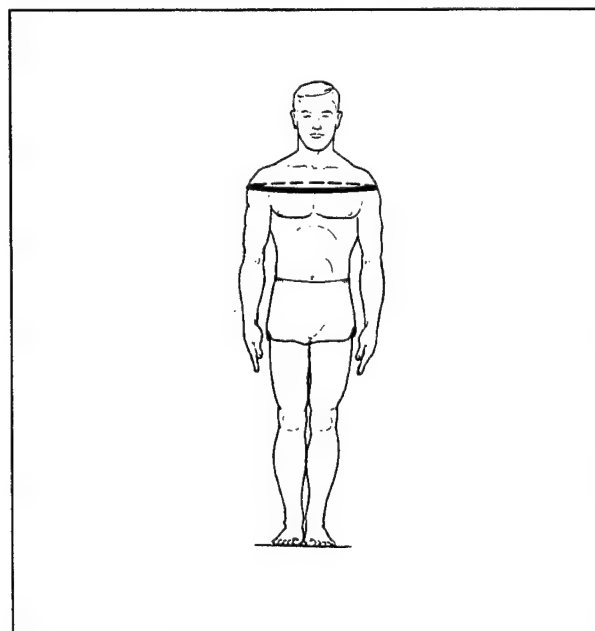
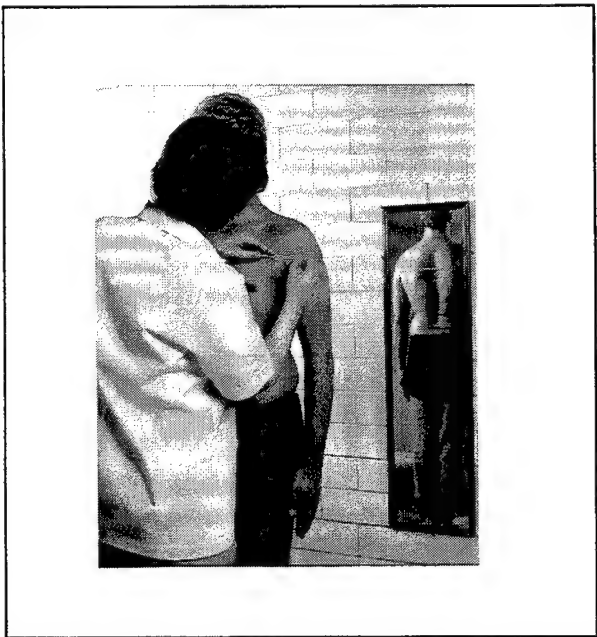
<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
188.2	Mean	7.41
0.6	SE(Mean)	0.02
14.8	StDev	0.58
0.4	SE(StDev)	0.02
142.0	Minimum	5.59
238.0	Maximum	9.37
Coefficient of Variation		7.8%
Symmetry---Veta I		0.28
Kurtosis---Veta II		3.06
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
157.4	1st	6.20
161.1	2nd	6.34
163.3	3rd	6.43
166.2	5th	6.54
170.4	10th	6.71
173.3	15th	6.82
175.6	20th	6.91
177.7	25th	7.00
179.7	30th	7.07
181.5	35th	7.15
183.3	40th	7.22
185.2	45th	7.29
187.0	50th	7.36
188.9	55th	7.44
190.9	60th	7.52
193.0	65th	7.60
195.3	70th	7.69
197.8	75th	7.79
200.6	80th	7.90
204.0	85th	8.03
208.2	90th	8.20
214.4	95th	8.44
218.2	97th	8.59
220.8	98th	8.69
224.4	99th	8.83

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
217.1	Mean	8.55
0.6	SE(Mean)	0.02
15.4	StDev	0.61
0.4	SE(StDev)	0.02
176.0	Minimum	6.93
284.0	Maximum	11.18
Coefficient of Variation		7.1%
Symmetry---Veta I		0.33
Kurtosis---Veta II		3.78
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
183.3	1st	7.21
187.1	2nd	7.37
189.5	3rd	7.46
192.9	5th	7.59
198.1	10th	7.80
201.6	15th	7.94
204.4	20th	8.05
206.9	25th	8.14
209.1	30th	8.23
211.1	35th	8.31
213.0	40th	8.39
214.9	45th	8.46
216.8	50th	8.53
218.6	55th	8.61
220.5	60th	8.68
222.5	65th	8.76
224.6	70th	8.84
226.9	75th	8.93
229.6	80th	9.04
232.6	85th	9.16
236.6	90th	9.32
242.7	95th	9.56
246.9	97th	9.72
250.0	98th	9.84
255.2	99th	10.05



### **(43) Shoulder Circumference**

The horizontal circumference of the shoulders at the level of the maximum protrusion of the right deltoid muscle is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed with the palms facing the thighs. The measurement is taken at the maximum point of quiet respiration.



**(43) Shoulder Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1024.9	Mean	40.35
2.2	SE(Mean)	0.09
53.2	StDev	2.09
1.6	SE(StDev)	0.06
862.0	Minimum	33.94
1192.0	Maximum	46.93
Coefficient of Variation		5.2%
Symmetry----Veta I		0.23
Kurtosis----Veta II		3.22
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
905.4	1st	35.64
920.2	2nd	36.23
929.3	3rd	36.59
941.3	5th	37.06
959.3	10th	37.77
971.2	15th	38.24
980.6	20th	38.61
988.8	25th	38.93
996.1	30th	39.22
1003.0	35th	39.49
1009.5	40th	39.75
1015.9	45th	40.00
1022.4	50th	40.25
1028.9	55th	40.51
1035.6	60th	40.77
1042.6	65th	41.05
1050.2	70th	41.35
1058.6	75th	41.68
1068.1	80th	42.05
1079.5	85th	42.50
1094.5	90th	43.09
1117.7	95th	44.00
1133.5	97th	44.62
1145.5	98th	45.10
1164.9	99th	45.86

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1181.5	Mean	46.52
2.3	SE(Mean)	0.09
62.5	StDev	2.46
1.6	SE(StDev)	0.06
1007.0	Minimum	39.65
1401.0	Maximum	55.16
Coefficient of Variation		5.3%
Symmetry----Veta I		0.04
Kurtosis----Veta II		3.04
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
1033.2	1st	40.68
1051.0	2nd	41.38
1062.3	3rd	41.82
1077.7	5th	42.43
1101.3	10th	43.36
1117.1	15th	43.98
1129.4	20th	44.47
1140.0	25th	44.88
1149.4	30th	45.25
1158.1	35th	45.59
1166.2	40th	45.91
1174.0	45th	46.22
1181.8	50th	46.53
1189.5	55th	46.83
1197.3	60th	47.14
1205.3	65th	47.45
1213.8	70th	47.79
1223.0	75th	48.15
1233.3	80th	48.56
1245.4	85th	49.03
1261.0	90th	49.64
1284.8	95th	50.58
1300.9	97th	51.22
1313.2	98th	51.70
1333.5	99th	52.50

#### **(44) Shoulder Length**

The surface distance between the trapezius landmark at the base of the side of the neck and the acromion landmark on the tip of the right shoulder is measured with a tape. The subject stands looking straight ahead. The shoulders and upper extremities are relaxed.



**(44) Shoulder Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
143.8	Mean	5.66
0.5	SE(Mean)	0.02
11.3	StDev	0.44
0.3	SE(StDev)	0.01
109.0	Minimum	4.29
179.0	Maximum	7.05
Coefficient of Variation		7.8%
Symmetry---Veta I		-0.07
Kurtosis---Veta II		3.22
Sample Size		582

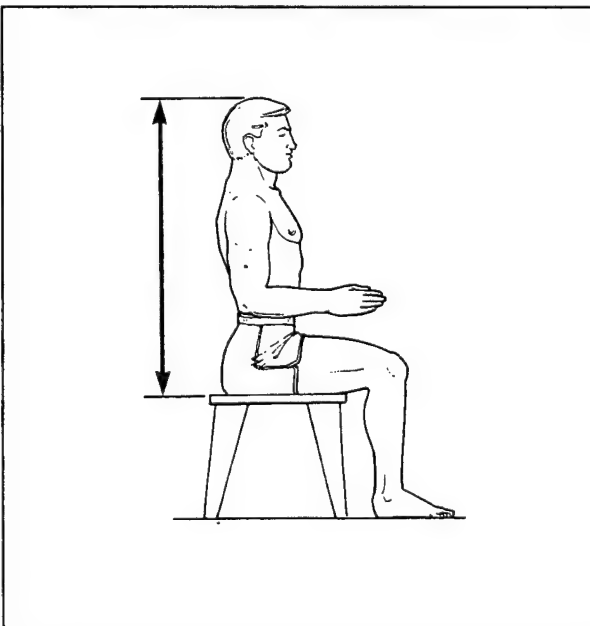
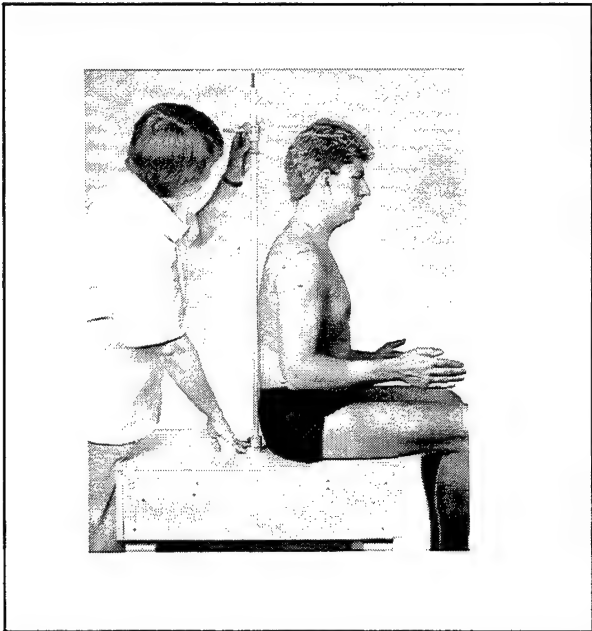
<b>Percentiles</b>		
Millimeters		Inches
115.3	1st	4.54
119.1	2nd	4.69
121.5	3rd	4.78
124.6	5th	4.91
129.2	10th	5.09
132.2	15th	5.21
134.6	20th	5.30
136.5	25th	5.37
138.2	30th	5.44
139.8	35th	5.50
141.2	40th	5.56
142.6	45th	5.62
144.0	50th	5.67
145.4	55th	5.72
146.7	60th	5.78
148.1	65th	5.83
149.6	70th	5.89
151.2	75th	5.95
153.0	80th	6.02
155.1	85th	6.11
157.9	90th	6.22
162.2	95th	6.39
165.2	97th	6.50
167.5	98th	6.59
171.4	99th	6.75

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
150.9	Mean	5.94
0.4	SE(Mean)	0.02
11.1	StDev	0.44
0.3	SE(StDev)	0.01
114.0	Minimum	4.49
185.0	Maximum	7.28
Coefficient of Variation		7.4%
Symmetry---Veta I		0.14
Kurtosis---Veta II		3.07
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
125.3	1st	4.93
128.6	2nd	5.06
130.5	3rd	5.14
133.2	5th	5.24
137.0	10th	5.40
139.6	15th	5.50
141.6	20th	5.58
143.4	25th	5.64
144.9	30th	5.71
146.4	35th	5.76
147.8	40th	5.82
149.2	45th	5.87
150.5	50th	5.93
151.9	55th	5.98
153.3	60th	6.04
154.8	65th	6.09
156.4	70th	6.16
158.1	75th	6.22
160.1	80th	6.30
162.4	85th	6.39
165.3	90th	6.51
169.9	95th	6.69
172.8	97th	6.80
175.0	98th	6.89
178.4	99th	7.03

### (45) Sitting Height

The vertical distance between a sitting surface and the top of the head is measured with an anthropometer. The subject sits erect with the head in the Frankfort plane. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The thighs are parallel and the knees are flexed 90 degrees with the feet in line with the thighs. The measurement is made at the maximum point of quiet respiration.



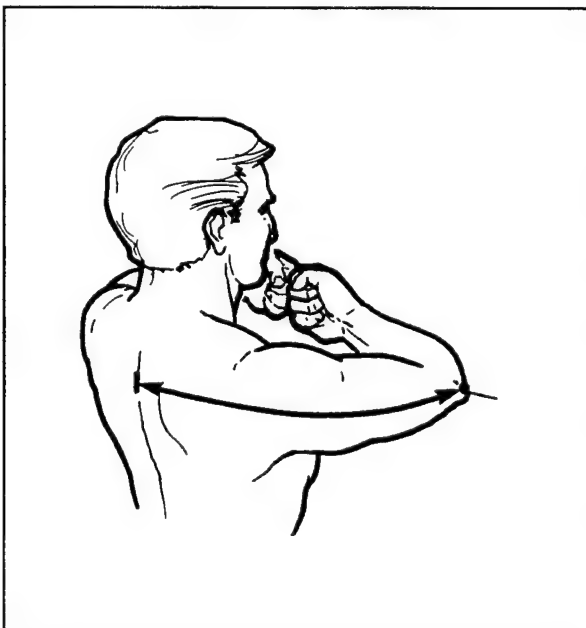
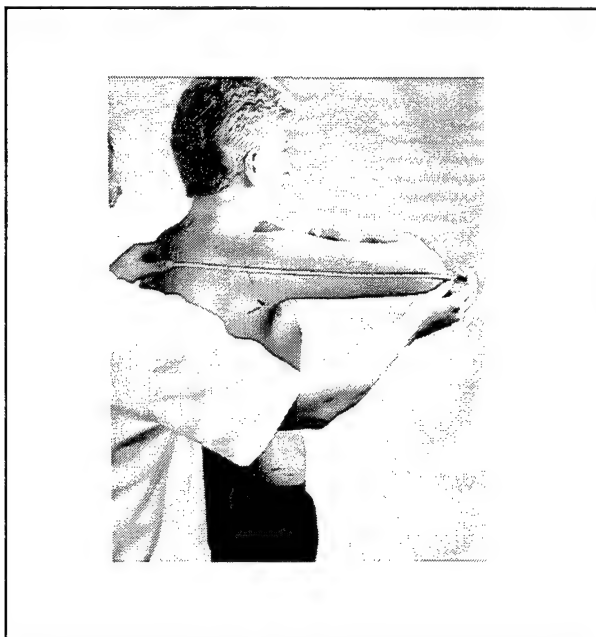
**(45) Sitting Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
864.6	Mean	34.04
1.4	SE(Mean)	0.05
33.5	StDev	1.32
1.0	SE(StDev)	0.04
754.0	Minimum	29.69
971.0	Maximum	38.23
Coefficient of Variation		3.9%
Symmetry---Veta I		0.11
Kurtosis---Veta II		2.88
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
791.6	1st	31.16
799.8	2nd	31.49
804.9	3rd	31.69
811.8	5th	31.96
822.5	10th	32.38
829.9	15th	32.67
835.9	20th	32.91
841.1	25th	33.12
845.9	30th	33.31
850.5	35th	33.48
854.8	40th	33.66
859.1	45th	33.82
863.4	50th	33.99
867.8	55th	34.16
872.2	60th	34.34
876.9	65th	34.52
881.8	70th	34.72
887.1	75th	34.93
893.1	80th	35.16
899.9	85th	35.43
908.4	90th	35.77
920.4	95th	36.24
927.5	97th	36.52
932.3	98th	36.70
938.9	99th	36.96

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
923.3	Mean	36.35
1.3	SE(Mean)	0.05
34.6	StDev	1.36
0.9	SE(StDev)	0.04
810.0	Minimum	31.89
1040.0	Maximum	40.94
Coefficient of Variation		3.7%
Symmetry---Veta I		-0.02
Kurtosis---Veta II		3.09
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
840.1	1st	33.08
850.9	2nd	33.50
857.6	3rd	33.76
866.3	5th	34.11
879.3	10th	34.62
887.9	15th	34.96
894.7	20th	35.22
900.4	25th	35.45
905.6	30th	35.65
910.3	35th	35.84
914.8	40th	36.02
919.2	45th	36.19
923.5	50th	36.36
927.8	55th	36.53
932.2	60th	36.70
936.7	65th	36.88
941.4	70th	37.06
946.6	75th	37.27
952.3	80th	37.49
958.9	85th	37.75
967.2	90th	38.08
979.3	95th	38.55
986.9	97th	38.85
992.3	98th	39.07
1000.6	99th	39.39

### **(46) Sleeve Length: Spine-Elbow**

The horizontal surface distance between the midspine landmark and the olecranon-center landmark on the tip of the raised elbow is measured with a tape. The measurement is made while the subject holds his/her arms up in a horizontal position parallel to the standing surface and joins them by bringing the fists together at the metacarpophalangeal and proximal interphalangeal knuckles. The forearms and fists are in a straight line.



**(46) Sleeve Length: Spine-Elbow**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
537.2	Mean	21.15
1.1	SE(Mean)	0.04
26.0	StDev	1.02
0.8	SE(StDev)	0.03
448.0	Minimum	17.64
615.0	Maximum	24.21
Coefficient of Variation		
		4.8%
Symmetry---Veta I		
		-0.14
Kurtosis---Veta II		
		3.09
Sample Size		582

<b>Percentiles</b>		
Millimeters		Inches
471.6	1st	18.57
481.1	2nd	18.94
486.6	3rd	19.16
493.8	5th	19.44
504.0	10th	19.84
510.6	15th	20.10
515.7	20th	20.30
520.0	25th	20.47
523.9	30th	20.63
527.5	35th	20.77
530.9	40th	20.90
534.2	45th	21.03
537.5	50th	21.16
540.8	55th	21.29
544.1	60th	21.42
547.6	65th	21.56
551.2	70th	21.70
555.2	75th	21.86
559.6	80th	22.03
564.6	85th	22.23
570.9	90th	22.47
579.5	95th	22.82
584.7	97th	23.02
588.1	98th	23.15
592.7	99th	23.34

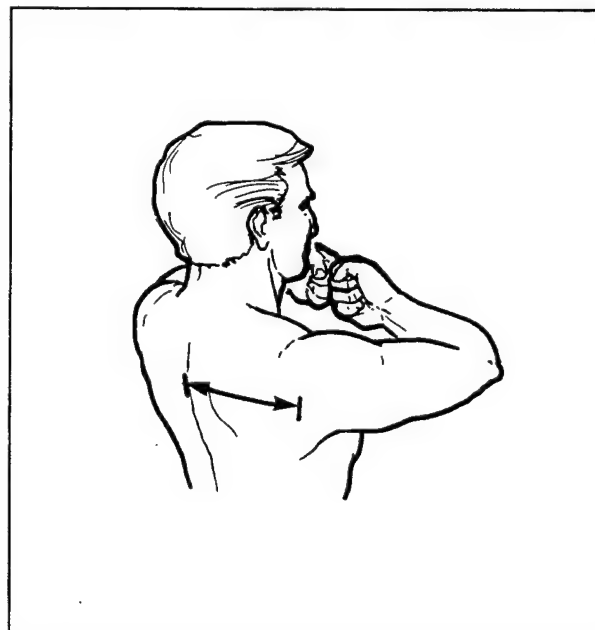
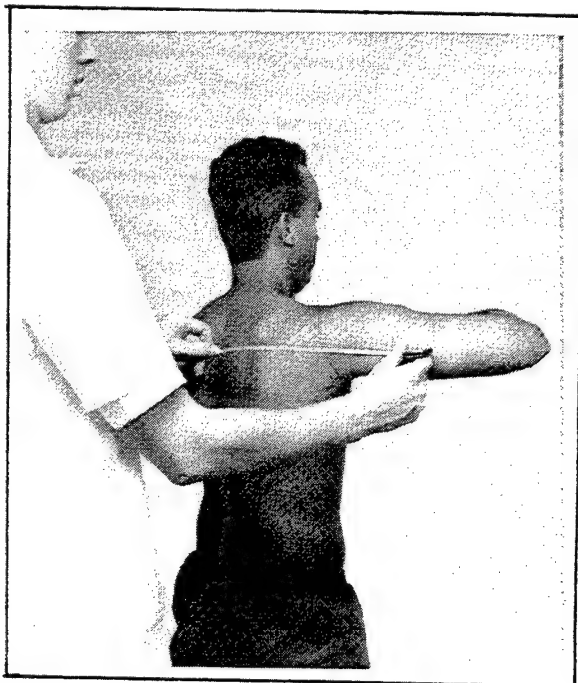
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
594.0	Mean	23.38
1.0	SE(Mean)	0.04
28.4	StDev	1.12
0.7	SE(StDev)	0.03
484.0	Minimum	19.06
679.0	Maximum	26.73
Coefficient of Variation		
		4.8%
Symmetry---Veta		
		0.03
Kurtosis---Veta II		
		3.11
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
529.2	1st	20.84
536.9	2nd	21.14
541.7	3rd	21.33
548.2	5th	21.58
558.1	10th	21.97
564.7	15th	22.23
570.1	20th	22.44
574.7	25th	22.62
578.8	30th	22.79
582.7	35th	22.94
586.4	40th	23.08
589.9	45th	23.23
593.5	50th	23.37
597.1	55th	23.51
600.7	60th	23.65
604.5	65th	23.80
608.6	70th	23.96
612.9	75th	24.13
617.9	80th	24.33
623.6	85th	24.55
630.9	90th	24.84
641.7	95th	25.26
648.6	97th	25.54
653.7	98th	25.73
661.5	99th	26.04



### **(47) Sleeve Length: Spine-Scye**

The horizontal surface distance between the midspine landmark and the right posterior-diagonal-scye landmark at the back of the raised right arm near the armpit is measured with a tape. The measurement is made while the subject holds his/her arms up in a horizontal position parallel to the standing surface and joins them by bringing the fists together at the metacarpophalangeal and proximal interphalangeal knuckles. The forearms and fists are in a straight line.



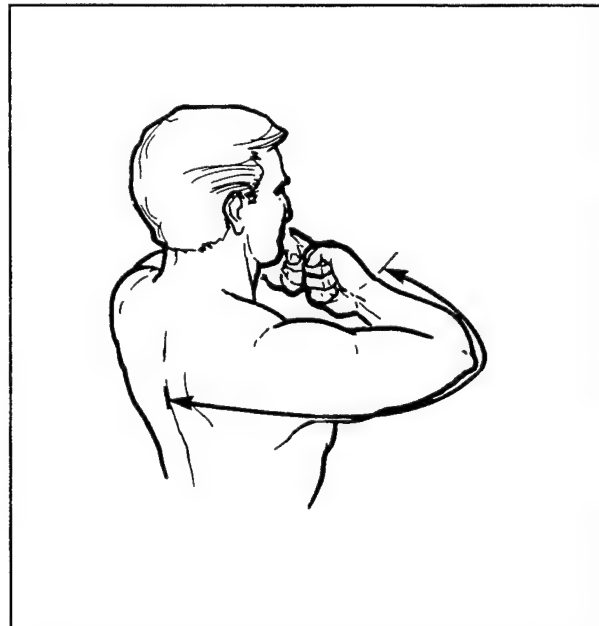
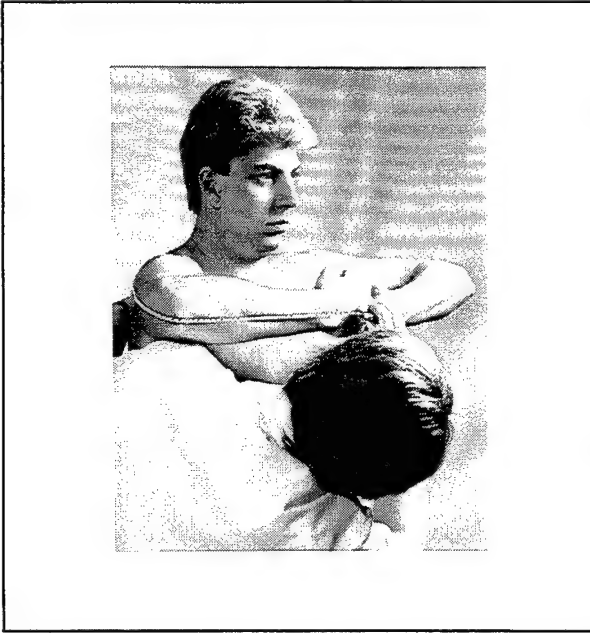
**(47) Sleeve Length: Spine-Scye**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
209.3	Mean	8.24
0.5	SE(Mean)	0.02
12.9	StDev	0.51
0.4	SE(StDev)	0.01
175.0	Minimum	6.89
252.0	Maximum	9.92
Coefficient of Variation		6.2%
Symmetry---Veta I		0.04
Kurtosis---Veta II		2.75
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
182.6	1st	7.19
184.0	2nd	7.24
185.3	3rd	7.30
187.6	5th	7.39
192.0	10th	7.56
195.2	15th	7.69
197.9	20th	7.79
200.3	25th	7.89
202.4	30th	7.97
204.4	35th	8.05
206.2	40th	8.12
208.0	45th	8.19
209.7	50th	8.25
211.4	55th	8.32
213.0	60th	8.39
214.7	65th	8.45
216.5	70th	8.52
218.4	75th	8.60
220.4	80th	8.68
222.8	85th	8.77
225.7	90th	8.89
230.2	95th	9.06
233.4	97th	9.19
235.9	98th	9.29
240.2	99th	9.46

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
227.4	Mean	8.95
0.6	SE(Mean)	0.02
15.1	StDev	0.59
0.4	SE(StDev)	0.02
180.0	Minimum	7.09
275.0	Maximum	10.83
Coefficient of Variation		6.6%
Symmetry---Veta I		0.05
Kurtosis---Veta II		2.95
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
193.1	1st	7.60
197.2	2nd	7.76
199.7	3rd	7.86
203.1	5th	8.00
208.4	10th	8.20
211.9	15th	8.34
214.7	20th	8.45
217.2	25th	8.55
219.4	30th	8.64
221.4	35th	8.72
223.4	40th	8.80
225.3	45th	8.87
227.2	50th	8.95
229.1	55th	9.02
231.1	60th	9.10
233.1	65th	9.18
235.3	70th	9.26
237.6	75th	9.36
240.3	80th	9.46
243.3	85th	9.58
247.2	90th	9.73
252.9	95th	9.96
256.6	97th	10.10
259.3	98th	10.21
263.3	99th	10.37

### **(48) Sleeve Length: Spine-Wrist**

The horizontal surface distance from the midspine landmark, across the olecranon-center landmark at the tip of the raised right elbow, to the dorsal wrist landmark is measured with a tape. The measurement is made while the subject holds his/her arms up in a horizontal position parallel to the standing surface and joins them by bringing the fists together at the metacarpophalangeal and proximal interphalangeal knuckles. The forearms and fists are in a straight line.



**(48) Sleeve Length: Spine-Wrist**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
801.3	Mean	31.55
1.5	SE(Mean)	0.06
37.1	StDev	1.46
1.1	SE(StDev)	0.04
671.0	Minimum	26.42
929.0	Maximum	36.57
Coefficient of Variation		4.6%
Symmetry---Veta I		-0.04
Kurtosis---Veta II		3.47
Sample Size		582

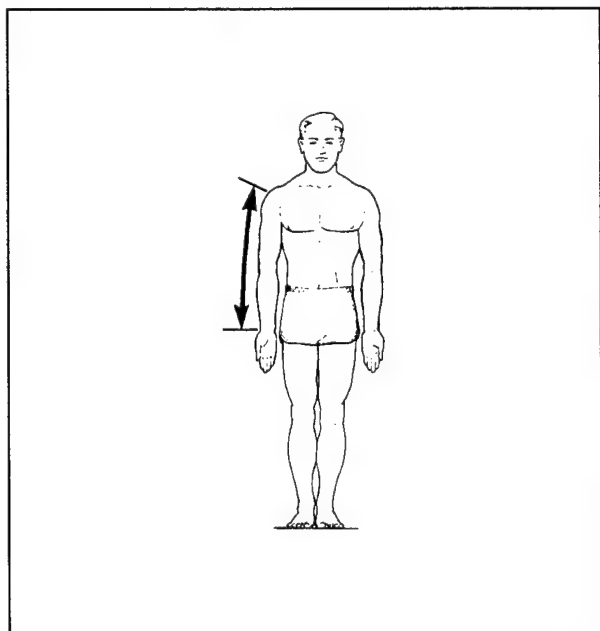
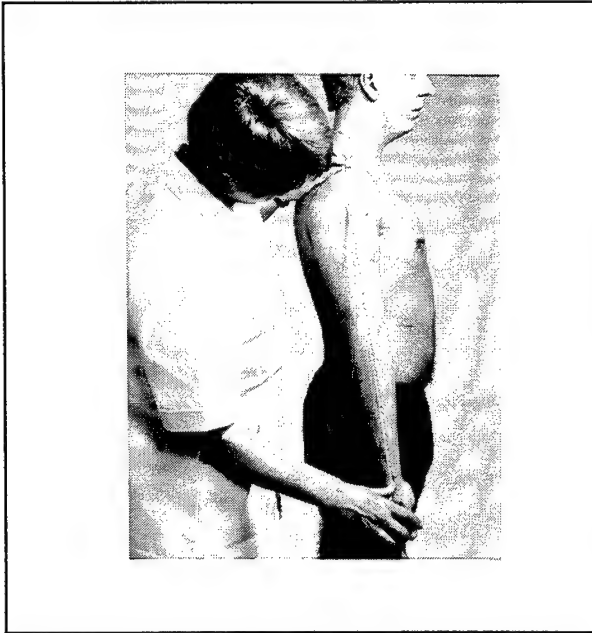
<b>Percentiles</b>		
Millimeters		Inches
707.9	1st	27.87
722.5	2nd	28.44
730.8	3rd	28.77
741.2	5th	29.18
755.7	10th	29.75
764.7	15th	30.11
771.6	20th	30.38
777.5	25th	30.61
782.7	30th	30.82
787.5	35th	31.00
792.1	40th	31.18
796.5	45th	31.36
801.0	50th	31.53
805.5	55th	31.71
810.0	60th	31.89
814.8	65th	32.08
819.9	70th	32.28
825.5	75th	32.50
831.9	80th	32.75
839.3	85th	33.04
848.7	90th	33.41
862.5	95th	33.96
871.2	97th	34.30
877.3	98th	34.54
886.3	99th	34.89

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
886.5	Mean	34.90
1.4	SE(Mean)	0.06
38.4	StDev	1.51
1.0	SE(StDev)	0.04
731.0	Minimum	28.78
995.0	Maximum	39.17
Coefficient of Variation		4.3%
Symmetry---Veta I		0.01
Kurtosis---Veta II		3.03
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
802.2	1st	31.58
810.5	2nd	31.91
816.1	3rd	32.13
824.0	5th	32.44
836.9	10th	32.95
846.0	15th	33.31
853.4	20th	33.60
859.8	25th	33.85
865.6	30th	34.08
871.1	35th	34.29
876.2	40th	34.50
881.3	45th	34.70
886.3	50th	34.89
891.2	55th	35.09
896.3	60th	35.29
901.5	65th	35.49
907.0	70th	35.71
912.9	75th	35.94
919.5	80th	36.20
927.1	85th	36.50
936.6	90th	36.88
950.4	95th	37.42
959.2	97th	37.76
965.6	98th	38.02
975.4	99th	38.40

### **(49) Sleeve Outseam**

The straight-line distance between the acromion landmark on the tip of the right shoulder and the stylium landmark on the right wrist is measured with a tape. The subject stands erect with both arms straight at the sides and the palms facing forward.



**(49) Sleeve Outseam**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
540.7	Mean	21.29
1.2	SE(Mean)	0.05
30.1	StDev	1.18
0.9	SE(StDev)	0.03
421.0	Minimum	16.57
641.0	Maximum	25.24
Coefficient of Variation		5.6%
Symmetry---Veta I		0.10
Kurtosis---Veta II		3.49
Sample Size		582

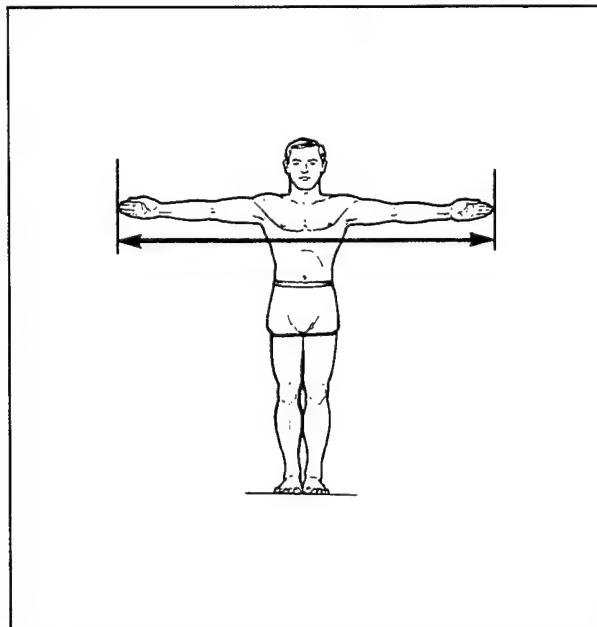
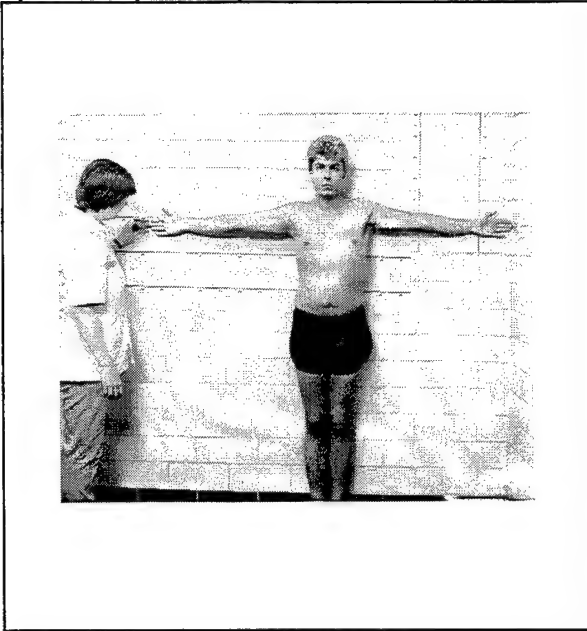
<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
470.7	1st	18.53
479.1	2nd	18.86
484.5	3rd	19.07
491.7	5th	19.36
502.7	10th	19.79
510.1	15th	20.08
515.8	20th	20.31
520.7	25th	20.50
525.1	30th	20.67
529.1	35th	20.83
532.9	40th	20.98
536.6	45th	21.12
540.2	50th	21.27
543.8	55th	21.41
547.5	60th	21.55
551.3	65th	21.70
555.3	70th	21.86
559.7	75th	22.04
564.8	80th	22.24
570.7	85th	22.47
578.5	90th	22.78
590.8	95th	23.26
599.4	97th	23.60
606.1	98th	23.86
617.4	99th	24.31

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
600.2	Mean	23.63
1.1	SE(Mean)	0.04
30.0	StDev	1.18
0.8	SE(StDev)	0.03
481.0	Minimum	18.94
693.0	Maximum	27.28
Coefficient of Variation		5.0%
Symmetry---Veta I		0.08
Kurtosis---Veta II		3.04
Sample Size		738

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
538.1	1st	21.18
543.6	2nd	21.40
547.4	3rd	21.55
552.9	5th	21.77
562.1	10th	22.13
568.8	15th	22.39
574.2	20th	22.61
579.1	25th	22.80
583.5	30th	22.97
587.6	35th	23.13
591.6	40th	23.29
595.5	45th	23.44
599.3	50th	23.60
603.2	55th	23.75
607.2	60th	23.91
611.3	65th	24.07
615.7	70th	24.24
620.4	75th	24.42
625.7	80th	24.63
631.7	85th	24.87
639.4	90th	25.17
650.6	95th	25.61
657.8	97th	25.90
662.9	98th	26.10
670.9	99th	26.41

**(50) Span**

The distance between the tips of the middle fingers of the horizontally outstretched arms is measured on a wall chart. The subject stands erect with his/her back against a wall-mounted scale and with the heels together. Both arms and hands are stretched horizontally against a back wall with the tip of the middle finger of one hand just touching a side wall. A block is placed at the tip of the middle finger of the other hand to establish the measurement on the scale. The measurement is taken at the maximum point of quiet respiration.



**(50) Span**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1651.1	Mean	65.00
3.3	SE(Mean)	0.13
80.1	StDev	3.15
2.4	SE(StDev)	0.09
1356.0	Minimum	53.39
1933.0	Maximum	76.10
Coefficient of Variation		4.8%
Symmetry---Veta I		0.13
Kurtosis---Veta II		3.47
Sample Size		579

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
1468.0	1st	57.79
1491.3	2nd	58.71
1505.4	3rd	59.27
1524.0	5th	60.00
1551.8	10th	61.10
1570.3	15th	61.82
1584.8	20th	62.39
1597.4	25th	62.89
1608.8	30th	63.34
1619.4	35th	63.75
1629.5	40th	64.15
1639.3	45th	64.54
1649.2	50th	64.93
1659.1	55th	65.32
1669.3	60th	65.72
1679.9	65th	66.14
1691.1	70th	66.58
1703.5	75th	67.07
1717.4	80th	67.61
1733.5	85th	68.25
1754.1	90th	69.06
1784.5	95th	70.26
1803.9	97th	71.02
1817.9	98th	71.57
1839.1	99th	72.40

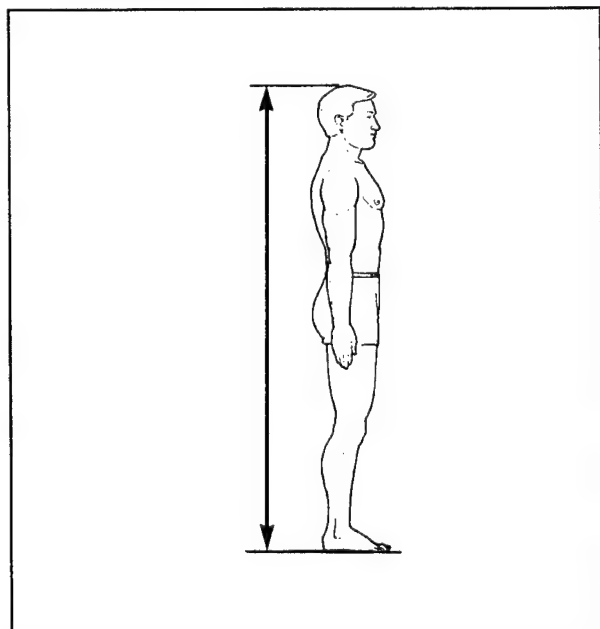
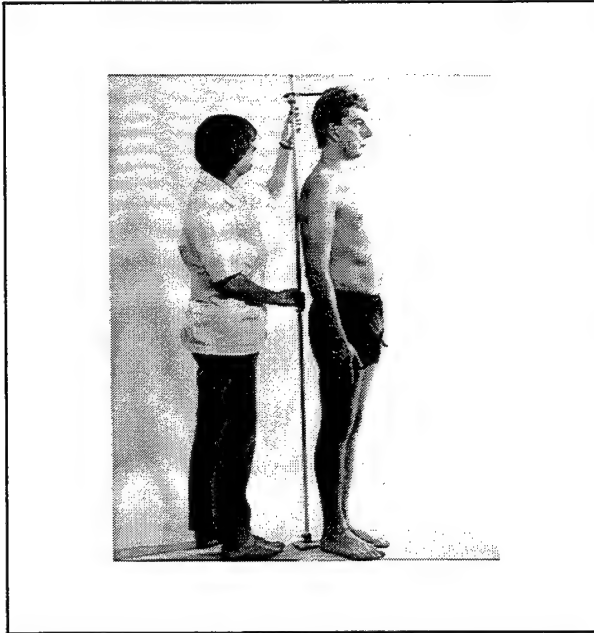
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1817.3	Mean	71.55
2.9	SE(Mean)	0.11
78.0	StDev	3.07
2.0	SE(StDev)	0.08
1474.0	Minimum	58.03
2125.0	Maximum	83.66
Coefficient of Variation		4.3%
Symmetry---Veta I		0.03
Kurtosis---Veta II		3.37
Sample Size		732

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
1646.1	1st	64.81
1663.5	2nd	65.49
1675.0	3rd	65.95
1691.2	5th	66.58
1717.4	10th	67.61
1735.7	15th	68.33
1750.5	20th	68.92
1763.6	25th	69.43
1775.3	30th	69.90
1786.3	35th	70.33
1796.8	40th	70.74
1807.0	45th	71.14
1817.1	50th	71.54
1827.2	55th	71.94
1837.4	60th	72.34
1847.9	65th	72.75
1859.0	70th	73.19
1870.9	75th	73.66
1884.1	80th	74.18
1899.1	85th	74.77
1917.6	90th	75.49
1943.7	95th	76.52
1959.6	97th	77.15
1970.6	98th	77.58
1986.8	99th	78.22



## (51) Stature

The vertical distance from a standing surface to the top of the head is measured with an anthropometer. The subject stands erect with the head in the Frankfort plane. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



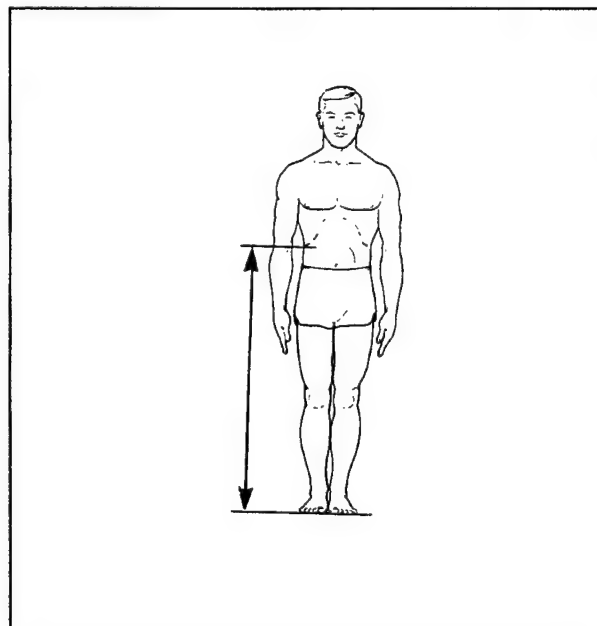
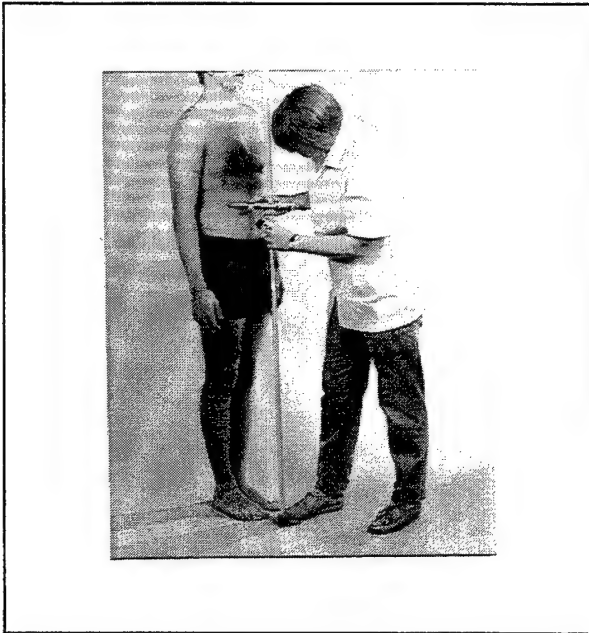
**(51) Stature**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1632.8	Mean	64.28
2.8	SE(Mean)	0.11
68.5	StDev	2.70
2.0	SE(StDev)	0.08
1428.0	Minimum	56.22
1870.0	Maximum	73.62
Coefficient of Variation		4.2%
Symmetry---Veta I		0.15
Kurtosis---Veta II		3.04
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
1475.4	1st	58.09
1497.2	2nd	58.94
1509.8	3rd	59.44
1525.7	5th	60.07
1548.6	10th	60.97
1563.6	15th	61.56
1575.4	20th	62.02
1585.7	25th	62.43
1595.1	30th	62.80
1603.9	35th	63.14
1612.4	40th	63.48
1620.9	45th	63.81
1629.4	50th	64.15
1638.1	55th	64.49
1647.1	60th	64.84
1656.5	65th	65.22
1666.7	70th	65.62
1677.8	75th	66.06
1690.5	80th	66.55
1705.2	85th	67.13
1723.9	90th	67.87
1750.7	95th	68.93
1767.0	97th	69.57
1778.1	98th	70.01
1793.6	99th	70.61

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1760.7	Mean	69.32
2.5	SE(Mean)	0.10
68.6	StDev	2.70
1.8	SE(StDev)	0.07
1497.0	Minimum	58.94
1955.0	Maximum	76.97
Coefficient of Variation		3.9%
Symmetry---Veta I		-0.03
Kurtosis---Veta II		3.04
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
1594.6	1st	62.78
1617.8	2nd	63.69
1631.4	3rd	64.23
1648.9	5th	64.92
1674.1	10th	65.91
1690.5	15th	66.56
1703.3	20th	67.06
1714.3	25th	67.49
1724.2	30th	67.88
1733.4	35th	68.24
1742.2	40th	68.59
1750.8	45th	68.93
1759.4	50th	69.27
1768.0	55th	69.61
1776.9	60th	69.96
1786.1	65th	70.32
1795.9	70th	70.71
1806.6	75th	71.13
1818.7	80th	71.60
1832.6	85th	72.15
1850.2	90th	72.84
1875.5	95th	73.84
1891.0	97th	74.45
1901.7	98th	74.87
1917.0	99th	75.47

## (52) Tenth Rib Height

The vertical distance between a standing surface and the tenth rib landmark at the bottom of the right side of the rib cage is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



**(52) Tenth Rib Height**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1039.0	Mean	40.90
2.2	SE(Mean)	0.09
52.5	StDev	2.07
1.5	SE(StDev)	0.06
876.0	Minimum	34.49
1197.0	Maximum	47.13
Coefficient of Variation		
		5.1%
Symmetry---Veta I		
		0.14
Kurtosis---Veta II		
		3.09
Sample Size		582

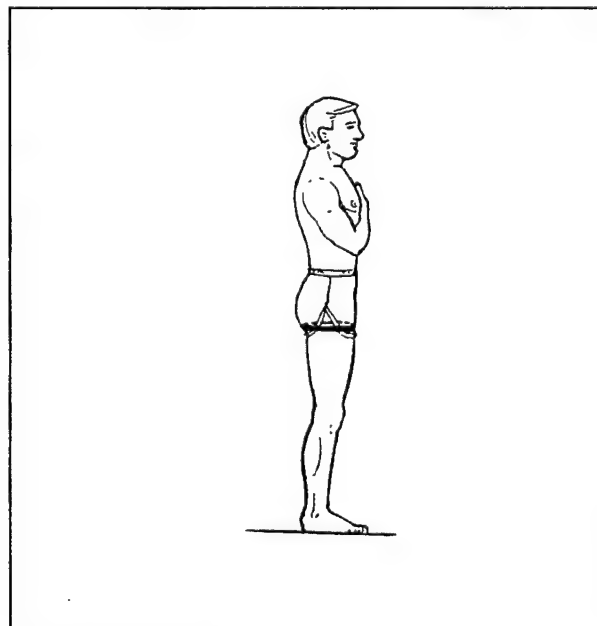
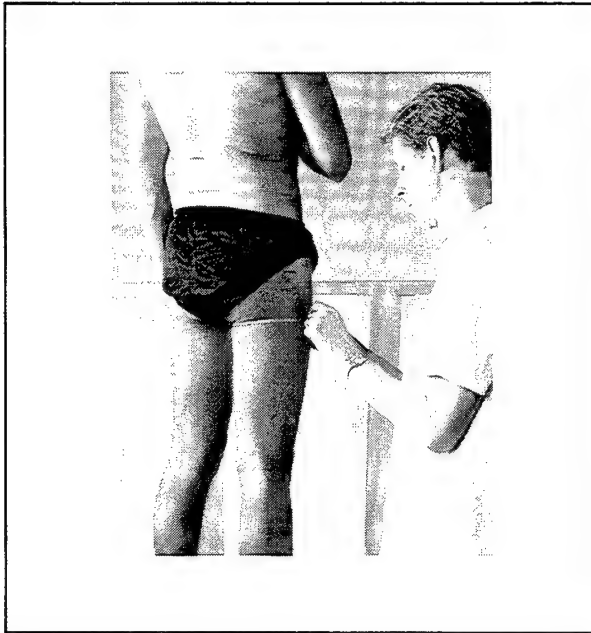
<b>Percentiles</b>		
Millimeters		Inches
912.0	1st	35.91
932.3	2nd	36.71
943.5	3rd	37.15
957.1	5th	37.68
975.4	10th	38.40
986.8	15th	38.85
995.6	20th	39.20
1003.3	25th	39.50
1010.2	30th	39.77
1016.7	35th	40.03
1023.1	40th	40.28
1029.4	45th	40.53
1035.8	50th	40.78
1042.4	55th	41.04
1049.3	60th	41.31
1056.6	65th	41.60
1064.5	70th	41.91
1073.2	75th	42.25
1083.2	80th	42.64
1094.9	85th	43.11
1109.7	90th	43.69
1131.1	95th	44.53
1143.8	97th	45.03
1152.3	98th	45.37
1163.5	99th	45.81

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1121.0	Mean	44.13
1.9	SE(Mean)	0.08
51.9	StDev	2.04
1.3	SE(StDev)	0.05
905.0	Minimum	35.63
1281.0	Maximum	50.43
Coefficient of Variation		
		4.6%
Symmetry---Veta I		
		-0.06
Kurtosis---Veta II		
		3.15
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
1001.8	1st	39.44
1016.2	2nd	40.01
1025.2	3rd	40.36
1037.1	5th	40.83
1055.4	10th	41.55
1067.7	15th	42.03
1077.4	20th	42.42
1085.9	25th	42.75
1093.6	30th	43.06
1100.7	35th	43.34
1107.6	40th	43.60
1114.2	45th	43.87
1120.8	50th	44.13
1127.4	55th	44.39
1134.2	60th	44.65
1141.2	65th	44.93
1148.6	70th	45.22
1156.6	75th	45.54
1165.6	80th	45.89
1175.9	85th	46.29
1188.7	90th	46.80
1207.1	95th	47.52
1218.4	97th	47.97
1226.3	98th	48.28
1237.8	99th	48.73

### (53) Thigh Circumference

The circumference of the right thigh at its juncture with the buttock is measured with a tape. The measurement is made perpendicular to the long axis of the thigh. The subject stands erect with the weight distributed equally on both feet. The legs are spread apart just enough so that the thighs do not touch.



**(53) Thigh Circumference**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
580.9	Mean	22.87
1.9	SE(Mean)	0.08
46.6	StDev	1.83
1.4	SE(StDev)	0.05
423.0	Minimum	16.65
726.0	Maximum	28.58
Coefficient of Variation		
		8.0%
Symmetry---Veta I		
		0.25
Kurtosis---Veta II		
		3.17
Sample Size		582

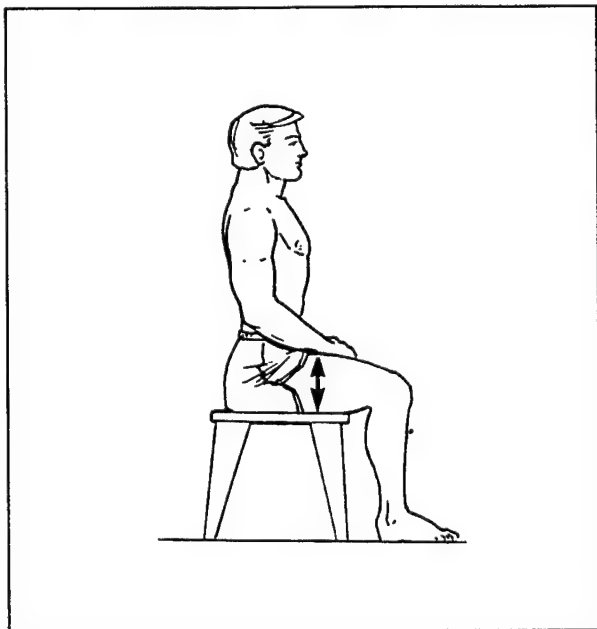
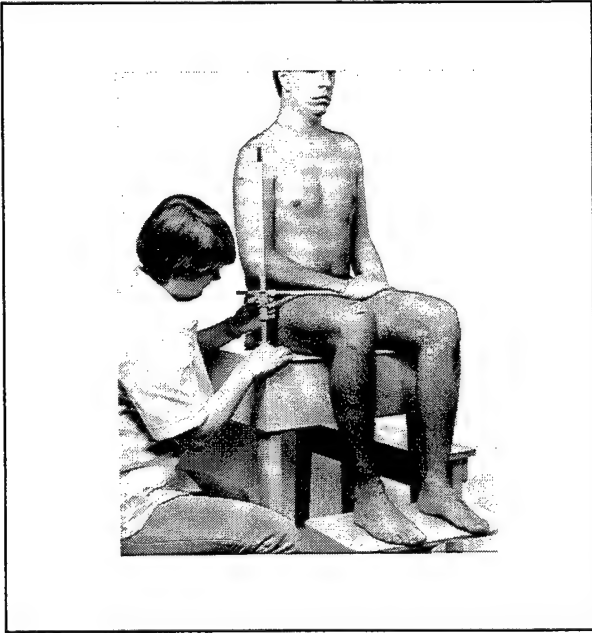
<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
477.6	1st	18.80
490.4	2nd	19.31
498.1	3rd	19.61
508.2	5th	20.01
523.3	10th	20.60
533.4	15th	21.00
541.5	20th	21.32
548.5	25th	21.60
554.9	30th	21.85
561.0	35th	22.09
566.8	40th	22.31
572.5	45th	22.54
578.3	50th	22.77
584.2	55th	23.00
590.3	60th	23.24
596.7	65th	23.49
603.6	70th	23.76
611.2	75th	24.06
619.8	80th	24.40
630.1	85th	24.81
643.4	90th	25.33
663.5	95th	26.12
676.7	97th	26.64
686.3	98th	27.02
701.3	99th	27.61

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
600.1	Mean	23.63
1.8	SE(Mean)	0.07
49.0	StDev	1.93
1.3	SE(StDev)	0.05
459.0	Minimum	18.07
787.0	Maximum	30.98
Coefficient of Variation		
		8.2%
Symmetry---Veta I		
		0.03
Kurtosis---Veta II		
		2.95
Sample Size		738

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
488.2	1st	19.22
499.7	2nd	19.67
507.5	3rd	19.98
518.4	5th	20.41
536.0	10th	21.10
548.1	15th	21.58
557.9	20th	21.96
566.3	25th	22.30
573.9	30th	22.59
580.9	35th	22.87
587.5	40th	23.13
593.9	45th	23.38
600.2	50th	23.63
606.5	55th	23.88
612.9	60th	24.13
619.4	65th	24.39
626.2	70th	24.65
633.6	75th	24.94
641.8	80th	25.27
651.2	85th	25.64
663.0	90th	26.10
680.4	95th	26.79
691.6	97th	27.23
700.0	98th	27.56
713.2	99th	28.08

### (54) Thigh Clearance

The vertical distance between a sitting surface and the highest point on the top of the right thigh is measured with an anthropometer. The subject sits with the thighs parallel, knees flexed 90 degrees, and the feet in line with the thighs.



**(54) Thigh Clearance**

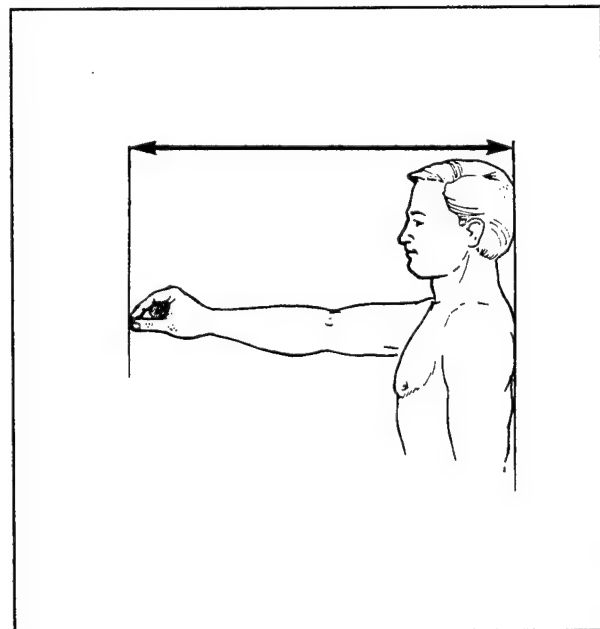
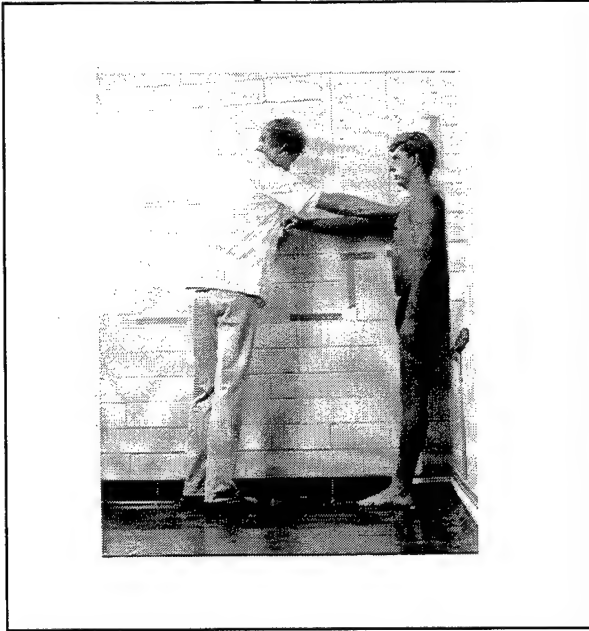
<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
157.4	Mean	6.20
0.5	SE(Mean)	0.02
12.2	StDev	0.48
0.4	SE(StDev)	0.01
121.0	Minimum	4.76
206.0	Maximum	8.11
Coefficient of Variation		7.8%
Symmetry---Veta I		0.37
Kurtosis---Veta II		3.32
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
132.3	1st	5.21
134.6	2nd	5.30
136.2	3rd	5.36
138.4	5th	5.45
142.2	10th	5.60
144.8	15th	5.70
147.0	20th	5.79
148.9	25th	5.86
150.6	30th	5.93
152.2	35th	5.99
153.7	40th	6.05
155.2	45th	6.11
156.7	50th	6.17
158.3	55th	6.23
159.8	60th	6.29
161.4	65th	6.36
163.2	70th	6.42
165.1	75th	6.50
167.3	80th	6.59
169.9	85th	6.69
173.3	90th	6.82
178.6	95th	7.03
182.3	97th	7.18
185.1	98th	7.29
189.8	99th	7.47

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
168.0	Mean	6.61
0.5	SE(Mean)	0.02
12.7	StDev	0.50
0.3	SE(StDev)	0.01
131.0	Minimum	5.16
213.0	Maximum	8.39
Coefficient of Variation		7.5%
Symmetry---Veta I		0.29
Kurtosis---Veta II		3.20
Sample Size		736
<b>Percentiles</b>		
Millimeters		Inches
141.4	1st	5.57
143.8	2nd	5.66
145.5	3rd	5.73
148.0	5th	5.83
152.1	10th	5.99
154.9	15th	6.10
157.2	20th	6.19
159.2	25th	6.27
161.1	30th	6.34
162.8	35th	6.41
164.4	40th	6.47
165.9	45th	6.53
167.5	50th	6.59
169.1	55th	6.66
170.7	60th	6.72
172.3	65th	6.79
174.1	70th	6.85
176.0	75th	6.93
178.2	80th	7.02
180.8	85th	7.12
184.2	90th	7.25
189.5	95th	7.46
193.2	97th	7.61
196.1	98th	7.72
201.0	99th	7.91



## (55) Thumbtip Reach

The horizontal distance from a back wall to the tip of the right thumb is measured on a wall scale. The subject stands erect in a corner looking straight ahead with the feet together and the heels 20 cm from the back wall. The buttocks and shoulders are against the wall. The right arm and hand, palm down, are stretched forward horizontally along a scale on the side wall. The thumb continues the horizontal line of the arm and the index finger curves around to touch the pad at the end of thumb. The subject's right shoulder is held against the rear wall.



**(55) Thumbtip Reach**

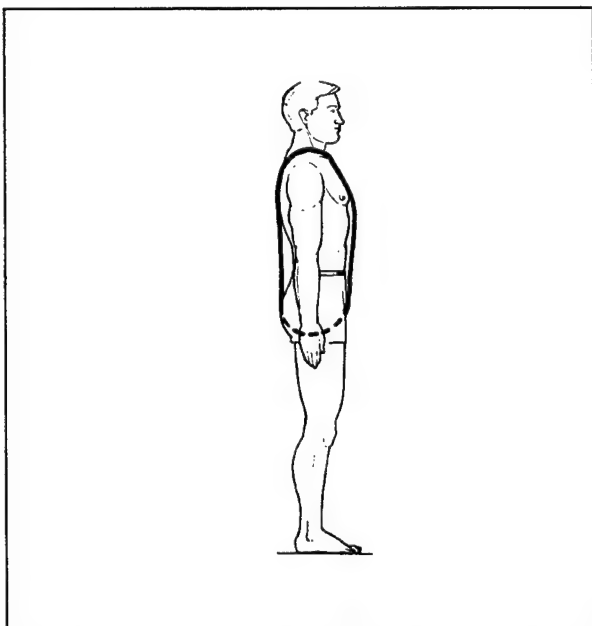
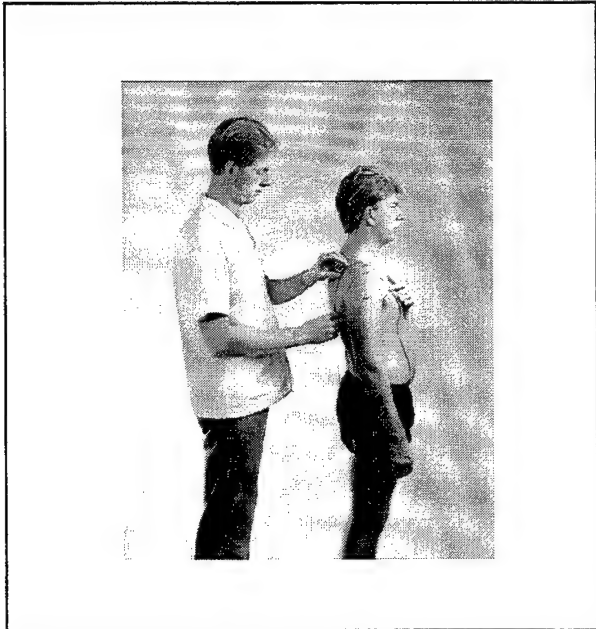
<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
727.4	Mean	28.64
1.5	SE(Mean)	0.06
36.8	StDev	1.45
1.1	SE(StDev)	0.04
605.0	Minimum	23.82
847.0	Maximum	33.35
Coefficient of Variation		5.1%
Symmetry---Veta I		0.16
Kurtosis---Veta II		3.37
Sample Size		580
<b>Percentiles</b>		
Millimeters		Inches
641.2	1st	25.25
653.9	2nd	25.75
661.3	3rd	26.03
670.5	5th	26.40
683.5	10th	26.91
691.7	15th	27.23
698.1	20th	27.48
703.5	25th	27.70
708.3	30th	27.89
712.8	35th	28.06
717.1	40th	28.23
721.4	45th	28.40
725.6	50th	28.57
729.9	55th	28.74
734.4	60th	28.91
739.1	65th	29.10
744.2	70th	29.30
749.9	75th	29.52
756.5	80th	29.78
764.3	85th	30.09
774.7	90th	30.50
790.9	95th	31.14
801.8	97th	31.57
810.1	98th	31.89
823.3	99th	32.41

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
800.3	Mean	31.51
1.4	SE(Mean)	0.05
37.4	StDev	1.47
1.0	SE(StDev)	0.04
662.0	Minimum	26.06
925.0	Maximum	36.42
Coefficient of Variation		4.7%
Symmetry---Veta I		0.13
Kurtosis---Veta II		2.97
Sample Size		733
<b>Percentiles</b>		
Millimeters		Inches
727.8	1st	28.65
731.8	2nd	28.81
735.4	3rd	28.95
741.3	5th	29.19
752.3	10th	29.62
760.6	15th	29.94
767.5	20th	30.22
773.7	25th	30.46
779.3	30th	30.68
784.6	35th	30.89
789.7	40th	31.09
794.6	45th	31.28
799.4	50th	31.47
804.3	55th	31.66
809.2	60th	31.86
814.2	65th	32.06
819.5	70th	32.26
825.2	75th	32.49
831.6	80th	32.74
838.9	85th	33.03
848.2	90th	33.39
862.1	95th	33.94
871.3	97th	34.30
878.3	98th	34.58
889.8	99th	35.03

## **(56) Vertical Trunk Circumference (USA)\***

The vertical circumference of the torso is measured with a tape passing over the maximum protrusion of the right buttock, to the right of the genitalia, over the right bustpoint landmark on women or the nipple (thelion) on men, and across the midshoulder landmark. The subject stands erect looking straight ahead with the right arm hanging relaxed at the side. The heels are together with the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration.

\*US Army



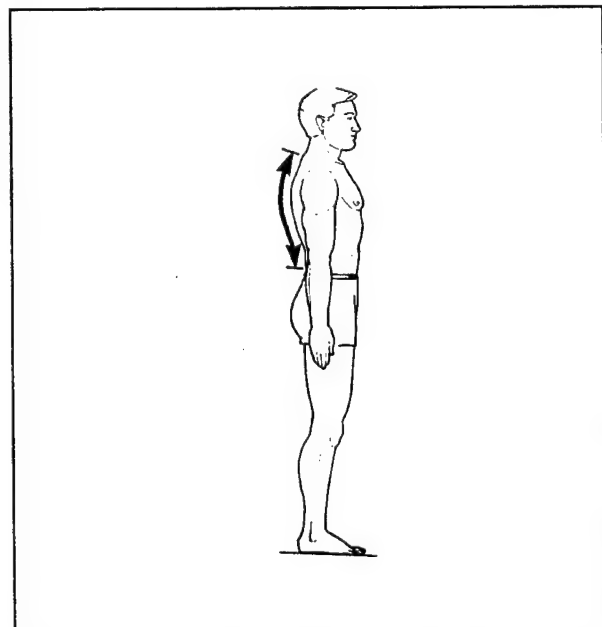
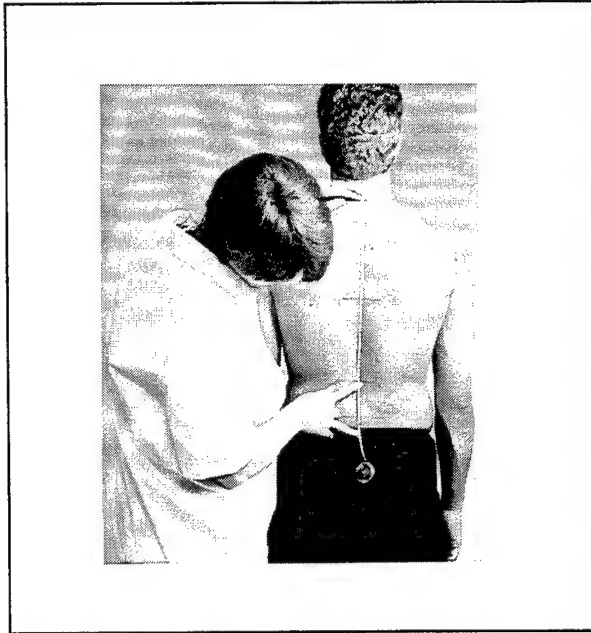
**(56) Vertical Trunk Circumference (USA)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1551.1	Mean	61.07
2.7	SE(Mean)	0.11
66.1	StDev	2.60
1.9	SE(StDev)	0.08
1365.0	Minimum	53.74
1773.0	Maximum	69.80
Coefficient of Variation		4.3%
Symmetry----Veta I		0.23
Kurtosis----Veta II		3.24
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
1404.3	1st	55.29
1420.0	2nd	55.91
1430.4	3rd	56.32
1445.0	5th	56.89
1467.8	10th	57.79
1483.5	15th	58.40
1495.9	20th	58.89
1506.6	25th	59.32
1516.2	30th	59.69
1525.0	35th	60.04
1533.4	40th	60.37
1541.5	45th	60.69
1549.6	50th	61.01
1557.6	55th	61.32
1565.8	60th	61.65
1574.3	65th	61.98
1583.4	70th	62.34
1593.2	75th	62.73
1604.5	80th	63.17
1617.8	85th	63.69
1635.3	90th	64.38
1663.0	95th	65.47
1682.4	97th	66.24
1697.7	98th	66.84
1723.6	99th	67.86

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1657.9	Mean	65.27
2.9	SE(Mean)	0.11
79.1	StDev	3.11
2.1	SE(StDev)	0.08
1425.0	Minimum	56.10
1886.0	Maximum	74.25
Coefficient of Variation		4.8%
Symmetry----Veta I		0.14
Kurtosis----Veta II		2.97
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
1476.6	1st	58.13
1501.0	2nd	59.09
1515.4	3rd	59.66
1533.9	5th	60.39
1560.9	10th	61.45
1578.6	15th	62.15
1592.5	20th	62.70
1604.5	25th	63.17
1615.4	30th	63.60
1625.6	35th	64.00
1635.4	40th	64.39
1645.1	45th	64.77
1654.8	50th	65.15
1664.6	55th	65.54
1674.7	60th	65.93
1685.4	65th	66.35
1696.8	70th	66.80
1709.5	75th	67.30
1723.8	80th	67.87
1740.7	85th	68.53
1762.5	90th	69.39
1795.0	95th	70.67
1816.0	97th	71.50
1831.2	98th	72.09
1854.3	99th	73.00

### **(57) Waist Back Length (Omphalion)**

The surface distance between the cervicale landmark at the back of the neck and the posterior-waist (omphalion) landmark at the level of the navel is measured with a tape. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



**(57) Waist Back Length (Omphalion)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
448.5	Mean	17.66
1.0	SE(Mean)	0.04
24.2	StDev	0.95
0.7	SE(StDev)	0.03
374.0	Minimum	14.72
555.0	Maximum	21.85
Coefficient of Variation		5.4%
Symmetry---Veta I		0.31
Kurtosis---Veta II		3.53
Sample Size		582

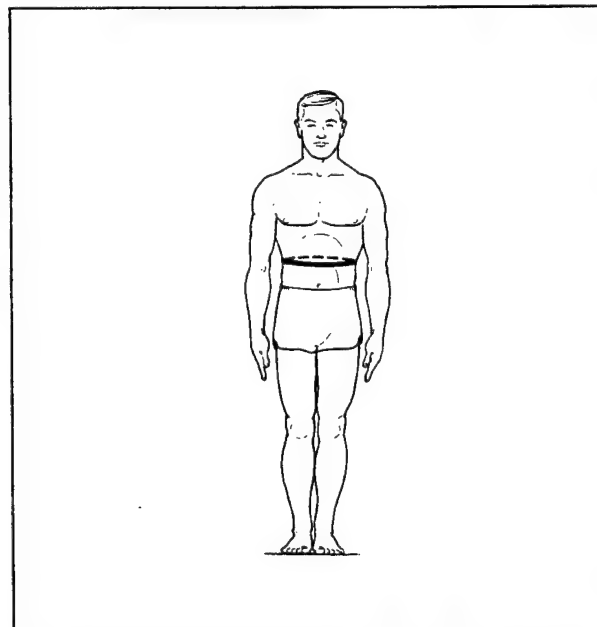
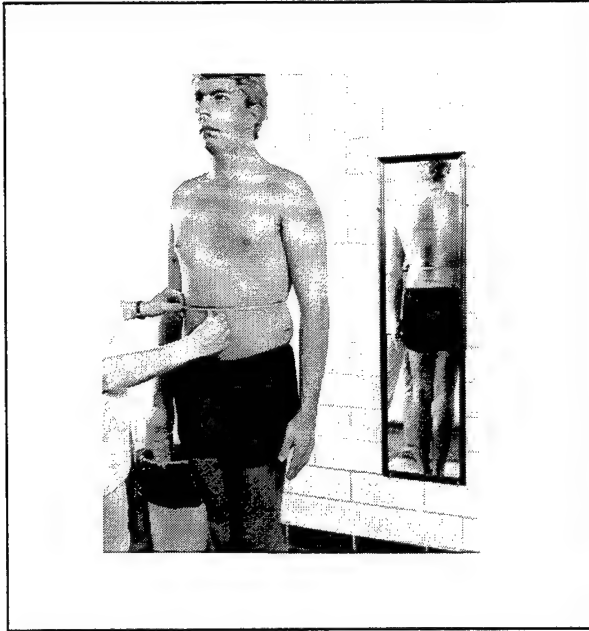
<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
395.4	1st	15.57
401.8	2nd	15.82
405.7	3rd	15.97
411.0	5th	16.18
419.0	10th	16.49
424.3	15th	16.71
428.5	20th	16.87
432.2	25th	17.02
435.5	30th	17.15
438.6	35th	17.27
441.5	40th	17.38
444.4	45th	17.50
447.3	50th	17.61
450.2	55th	17.73
453.2	60th	17.84
456.4	65th	17.97
459.8	70th	18.10
463.5	75th	18.25
467.8	80th	18.42
472.9	85th	18.62
479.6	90th	18.88
490.2	95th	19.30
497.4	97th	19.58
503.0	98th	19.80
512.1	99th	20.16

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
488.4	Mean	19.23
1.0	SE(Mean)	0.04
27.0	StDev	1.06
0.7	SE(StDev)	0.03
395.0	Minimum	15.55
571.0	Maximum	22.48
Coefficient of Variation		5.5%
Symmetry---Veta I		0.23
Kurtosis---Veta II		3.27
Sample Size		738

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
430.9	1st	16.96
437.0	2nd	17.20
441.0	3rd	17.36
446.5	5th	17.58
455.2	10th	17.92
461.2	15th	18.16
465.9	20th	18.34
470.1	25th	18.51
473.8	30th	18.65
477.3	35th	18.79
480.6	40th	18.92
483.8	45th	19.05
487.1	50th	19.18
490.3	55th	19.30
493.7	60th	19.44
497.2	65th	19.58
501.0	70th	19.72
505.2	75th	19.89
510.0	80th	20.08
515.7	85th	20.30
523.3	90th	20.60
535.4	95th	21.08
544.0	97th	21.42
550.7	98th	21.68
562.0	99th	22.12

### **(58) Waist Circumference (Natural Indentation)**

The horizontal circumference of the waist at the level of its natural indentation is measured with a tape passing over right and left waist (natural indentation) landmarks. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is made at the maximum point of quiet respiration.



**(58) Waist Circumference (Natural Indentation)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
733.8	Mean	28.89
2.8	SE(Mean)	0.11
67.9	StDev	2.67
2.0	SE(StDev)	0.08
573.0	Minimum	22.56
1008.0	Maximum	39.68
Coefficient of Variation		9.3%
Symmetry---Veta I		0.67
Kurtosis---Veta II		3.51
Sample Size		582

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
602.6	1st	23.73
618.2	2nd	24.34
627.1	3rd	24.69
638.4	5th	25.14
655.2	10th	25.80
666.7	15th	26.25
676.3	20th	26.62
684.9	25th	26.96
693.0	30th	27.28
700.9	35th	27.59
708.7	40th	27.90
716.7	45th	28.21
724.9	50th	28.54
733.4	55th	28.88
742.5	60th	29.23
752.2	65th	29.61
762.8	70th	30.03
774.8	75th	30.50
788.7	80th	31.05
805.4	85th	31.71
827.3	90th	32.57
860.4	95th	33.87
881.8	97th	34.72
897.3	98th	35.33
920.5	99th	36.24

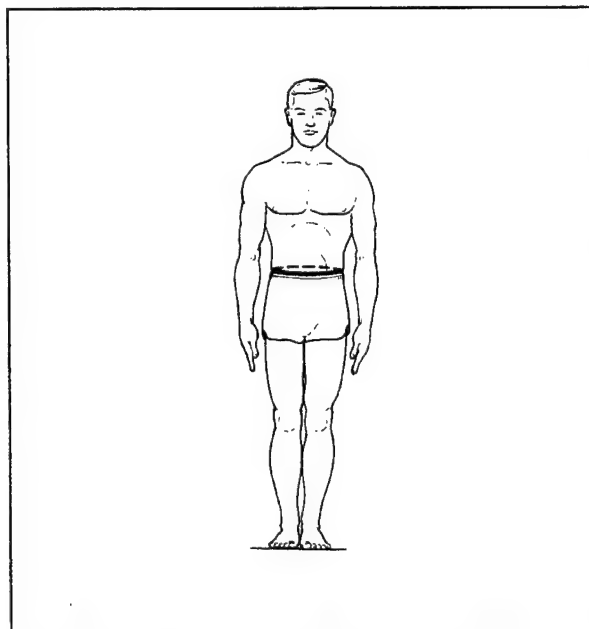
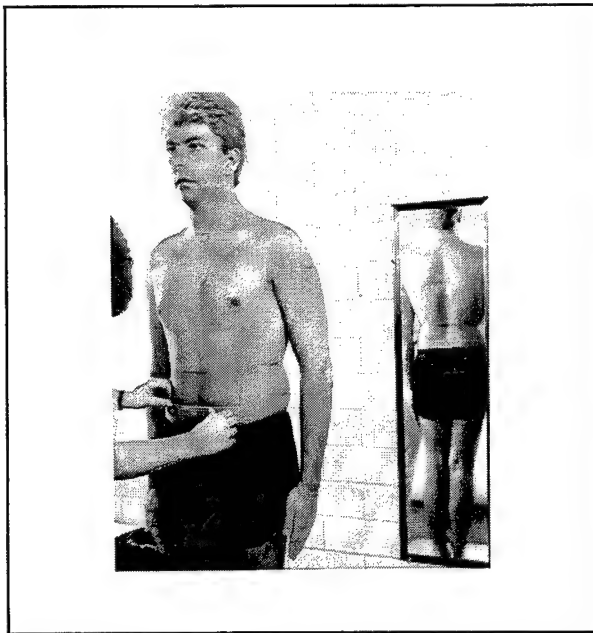
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
868.2	Mean	34.18
2.8	SE(Mean)	0.11
75.6	StDev	2.98
2.0	SE(StDev)	0.08
682.0	Minimum	26.85
1103.0	Maximum	43.43
Coefficient of Variation		8.7%
Symmetry---Veta I		0.22
Kurtosis---Veta II		2.69
Sample Size		738

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
715.0	1st	28.15
728.1	2nd	28.67
737.1	3rd	29.02
750.1	5th	29.53
772.0	10th	30.39
787.9	15th	31.02
801.2	20th	31.54
813.2	25th	32.01
824.2	30th	32.45
834.6	35th	32.86
844.7	40th	33.26
854.6	45th	33.65
864.6	50th	34.04
874.8	55th	34.44
885.1	60th	34.85
895.9	65th	35.27
907.4	70th	35.73
919.9	75th	36.22
933.9	80th	36.77
950.0	85th	37.40
970.2	90th	38.20
999.1	95th	39.33
1016.8	97th	40.03
1029.2	98th	40.52
1047.2	99th	41.23



### **(59) Waist Circumference (Omphalion)**

The horizontal circumference of the waist at the level of the center of the navel (omphalion) is measured with a tape. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is made at the maximum point of quiet respiration.

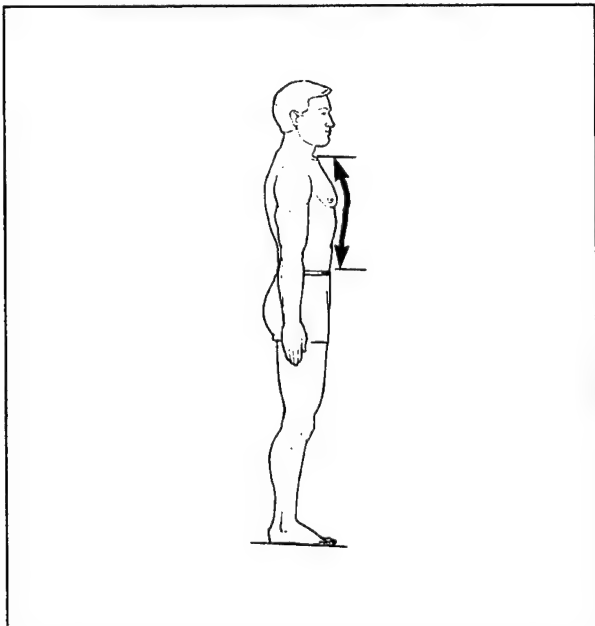
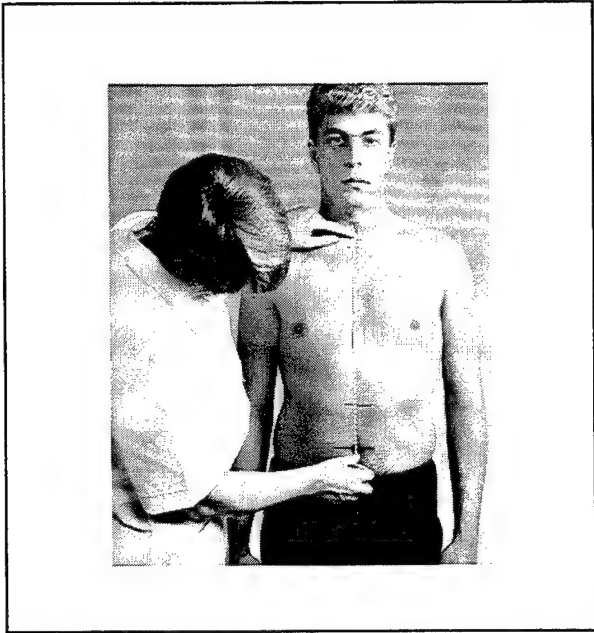


**(59) Waist Circumference (Omphalion)**

<b>Females</b>			<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>	<u>Millimeters</u>		<u>Inches</u>
808.3	Mean	31.82	896.7	Mean	35.30
3.7	SE(Mean)	0.14	3.2	SE(Mean)	0.13
88.6	StDev	3.49	86.7	StDev	3.41
2.6	SE(StDev)	0.10	2.3	SE(StDev)	0.09
632.0	Minimum	24.88	679.0	Minimum	26.73
1099.0	Maximum	43.27	1185.0	Maximum	46.65
Coefficient of Variation		11.0%	Coefficient of Variation		9.7%
Symmetry----Veta I		0.53	Symmetry----Veta I		0.19
Kurtosis----Veta II		2.91	Kurtosis----Veta II		2.70
Sample Size		582	Sample Size		738
<b>Percentiles</b>			<b>Percentiles</b>		
Millimeters		Inches	Millimeters		Inches
650.3	1st	25.60	717.1	1st	28.23
661.1	2nd	26.03	733.2	2nd	28.87
668.8	3rd	26.33	744.1	3rd	29.30
680.2	5th	26.78	759.8	5th	29.91
700.5	10th	27.58	785.9	10th	30.94
716.1	15th	28.19	804.7	15th	31.68
729.5	20th	28.72	820.4	20th	32.30
741.9	25th	29.21	834.3	25th	32.85
753.6	30th	29.67	847.1	30th	33.35
764.9	35th	30.11	859.2	35th	33.83
776.0	40th	30.55	870.9	40th	34.29
787.1	45th	30.99	882.3	45th	34.74
798.5	50th	31.44	893.8	50th	35.19
810.3	55th	31.90	905.4	55th	35.64
822.4	60th	32.38	917.2	60th	36.11
835.4	65th	32.89	929.5	65th	36.59
849.4	70th	33.44	942.5	70th	37.11
864.9	75th	34.05	956.6	75th	37.66
882.6	80th	34.75	972.3	80th	38.28
903.5	85th	35.57	990.3	85th	38.99
930.5	90th	36.63	1012.7	90th	39.87
970.9	95th	38.22	1044.4	95th	41.12
997.0	97th	39.25	1063.6	97th	41.87
1016.0	98th	40.00	1076.9	98th	42.40
1045.1	99th	41.15	1096.0	99th	43.15

## **(60) Waist Front Length (Omphalion)**

The surface distance between the anterior-neck landmark and the center of the navel (omphalion) is measured with a tape. The subject stands erect with the head in the Frankfort plane. The measurement is made at the maximum point of quiet respiration.



**(60) Waist Front Length (Omphalion)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
396.3	Mean	15.60
0.9	SE(Mean)	0.04
22.2	StDev	0.87
0.7	SE(StDev)	0.03
344.0	Minimum	13.54
481.0	Maximum	18.94
Coefficient of Variation		5.6%
Symmetry----Veta I		0.36
Kurtosis----Veta II		3.37
Sample Size		582

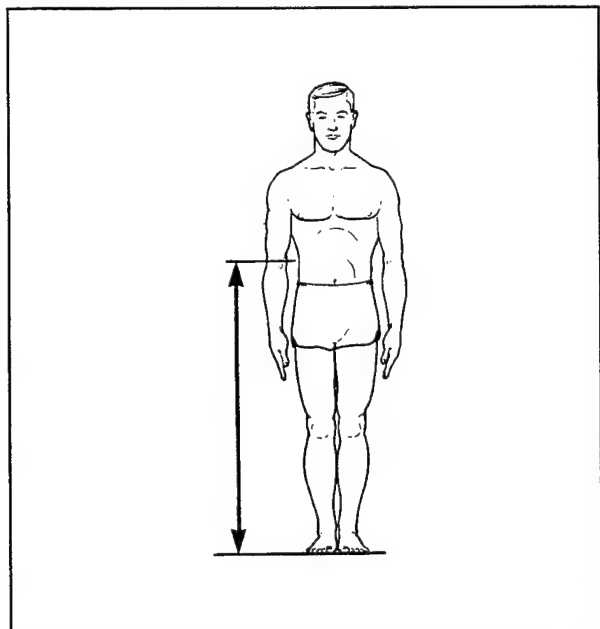
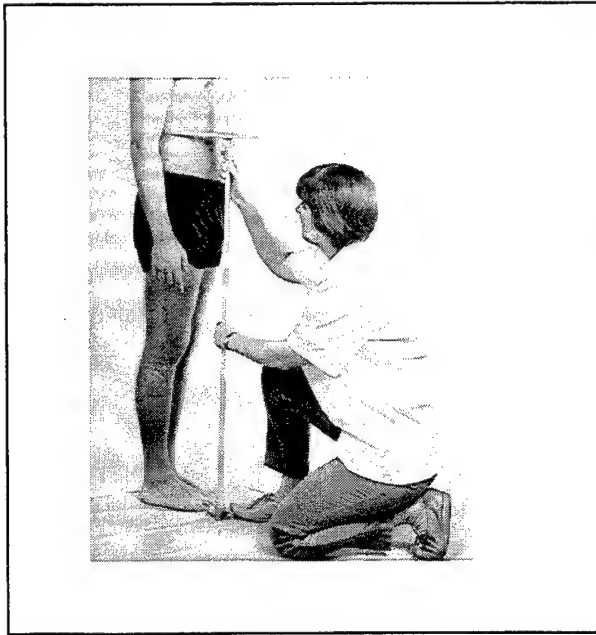
<b>Percentiles</b>		
Millimeters		Inches
348.6	1st	13.72
353.2	2nd	13.91
356.4	3rd	14.03
361.0	5th	14.21
368.4	10th	14.50
373.5	15th	14.71
377.6	20th	14.87
381.2	25th	15.01
384.3	30th	15.13
387.2	35th	15.25
390.0	40th	15.35
392.7	45th	15.46
395.4	50th	15.57
398.0	55th	15.67
400.8	60th	15.78
403.6	65th	15.89
406.7	70th	16.01
410.0	75th	16.14
413.9	80th	16.29
418.5	85th	16.48
424.8	90th	16.72
435.1	95th	17.13
442.6	97th	17.43
448.7	98th	17.66
459.3	99th	18.08

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
423.0	Mean	16.65
0.9	SE(Mean)	0.04
25.3	StDev	0.99
0.7	SE(StDev)	0.03
340.0	Minimum	13.39
521.0	Maximum	20.51
Coefficient of Variation		6.0%
Symmetry----Veta I		0.22
Kurtosis----Veta II		3.25
Sample Size		738

<b>Percentiles</b>		
Millimeters		Inches
365.4	1st	14.38
373.0	2nd	14.69
377.5	3rd	14.86
383.4	5th	15.09
391.9	10th	15.43
397.5	15th	15.65
401.9	20th	15.82
405.7	25th	15.97
409.2	30th	16.11
412.4	35th	16.24
415.5	40th	16.36
418.6	45th	16.48
421.6	50th	16.60
424.8	55th	16.72
428.0	60th	16.85
431.4	65th	16.98
435.0	70th	17.13
439.1	75th	17.29
443.7	80th	17.47
449.1	85th	17.68
456.1	90th	17.96
466.7	95th	18.37
473.6	97th	18.65
478.6	98th	18.84
486.4	99th	19.15

### **(61) Waist Height (Natural Indentation)**

The vertical distance between a standing surface and the landmark at the natural indentation of the right waist is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



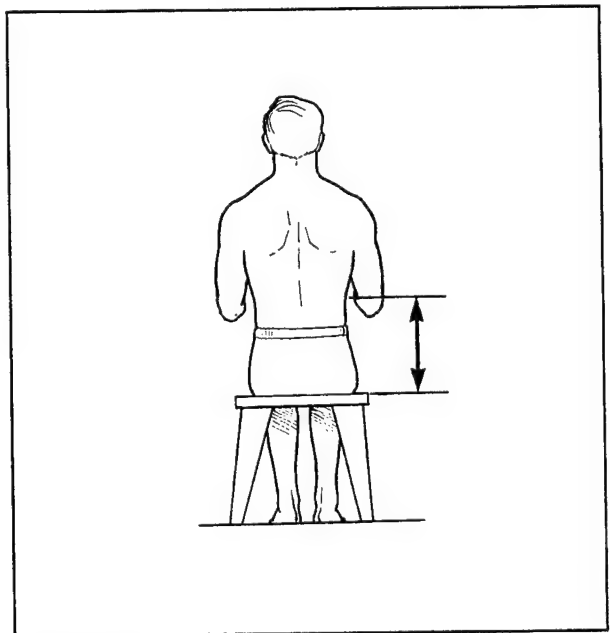
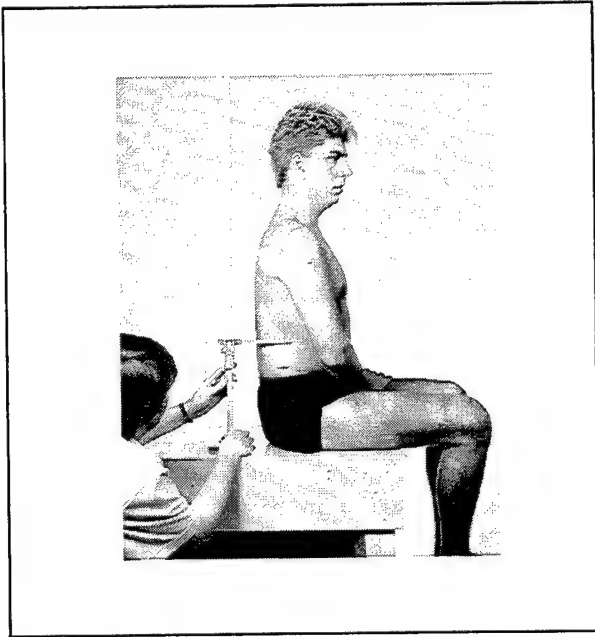
**(61) Waist Height (Natural Indentation)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
1051.2	Mean	41.38
2.3	SE(Mean)	0.09
55.2	StDev	2.17
1.6	SE(StDev)	0.06
863.0	Minimum	33.98
1222.0	Maximum	48.11
Coefficient of Variation		5.3%
Symmetry----Veta I		0.13
Kurtosis----Veta II		3.11
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
920.6	1st	36.25
940.8	2nd	37.04
952.0	3rd	37.48
965.7	5th	38.02
984.6	10th	38.76
996.6	15th	39.23
1005.8	20th	39.60
1013.9	25th	39.92
1021.2	30th	40.20
1028.1	35th	40.47
1034.7	40th	40.74
1041.3	45th	41.00
1048.1	50th	41.26
1054.9	55th	41.53
1062.1	60th	41.81
1069.6	65th	42.11
1077.8	70th	42.43
1086.8	75th	42.79
1097.1	80th	43.19
1109.2	85th	43.67
1124.6	90th	44.28
1146.8	95th	45.15
1160.3	97th	45.68
1169.4	98th	46.04
1181.9	99th	46.53

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
1126.7	Mean	44.36
1.9	SE(Mean)	0.08
52.4	StDev	2.06
1.4	SE(StDev)	0.05
917.0	Minimum	36.10
1280.0	Maximum	50.39
Coefficient of Variation		4.6%
Symmetry----Veta I		-0.03
Kurtosis----Veta II		2.97
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
1007.5	1st	39.66
1020.7	2nd	40.18
1029.1	3rd	40.52
1040.7	5th	40.97
1058.9	10th	41.69
1071.5	15th	42.18
1081.5	20th	42.58
1090.3	25th	42.93
1098.3	30th	43.24
1105.6	35th	43.53
1112.7	40th	43.81
1119.5	45th	44.08
1126.3	50th	44.34
1133.2	55th	44.61
1140.1	60th	44.88
1147.2	65th	45.17
1154.7	70th	45.46
1162.8	75th	45.78
1171.9	80th	46.14
1182.2	85th	46.54
1195.0	90th	47.05
1213.2	95th	47.76
1224.3	97th	48.20
1232.1	98th	48.51
1243.5	99th	48.96

## **(62) Waist Height, Sitting (Natural Indentation)**

The vertical distance from a sitting surface to the landmark at the natural indentation of the right waist is measured with an anthropometer. The subject sits erect looking straight ahead. The knees are flexed 90 degrees. The measurement is made at the maximum point of quiet respiration.



**(62) Waist Height, Sitting (Natural Indentation)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
283.0	Mean	11.14
0.9	SE(Mean)	0.04
21.6	StDev	0.85
0.6	SE(StDev)	0.02
208.0	Minimum	8.19
344.0	Maximum	13.54
Coefficient of Variation		
		7.6%
Symmetry---Veta I		
		-0.13
Kurtosis---Veta II		
		2.82
Sample Size		
		582

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
232.0	1st	9.13
237.8	2nd	9.36
241.5	3rd	9.51
246.6	5th	9.71
254.7	10th	10.03
260.2	15th	10.24
264.5	20th	10.42
268.3	25th	10.56
271.7	30th	10.70
274.8	35th	10.82
277.8	40th	10.94
280.7	45th	11.05
283.5	50th	11.16
286.3	55th	11.27
289.1	60th	11.38
292.0	65th	11.50
295.0	70th	11.61
298.3	75th	11.74
301.8	80th	11.88
305.9	85th	12.04
310.9	90th	12.24
318.0	95th	12.52
322.4	97th	12.69
325.5	98th	12.81
330.1	99th	13.00

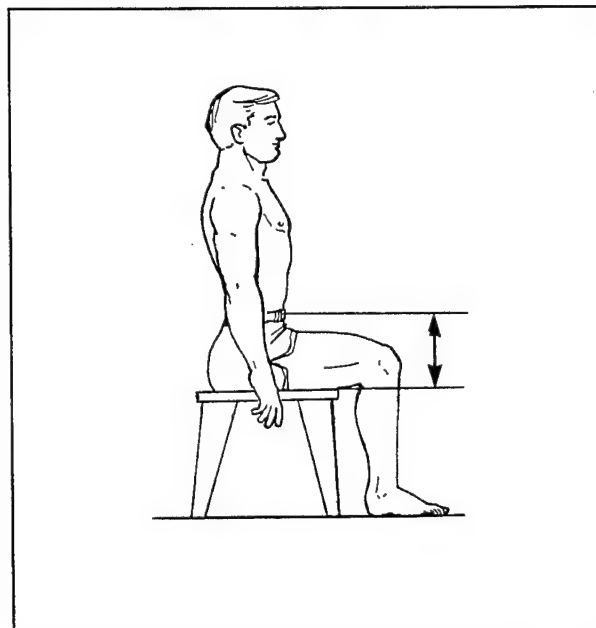
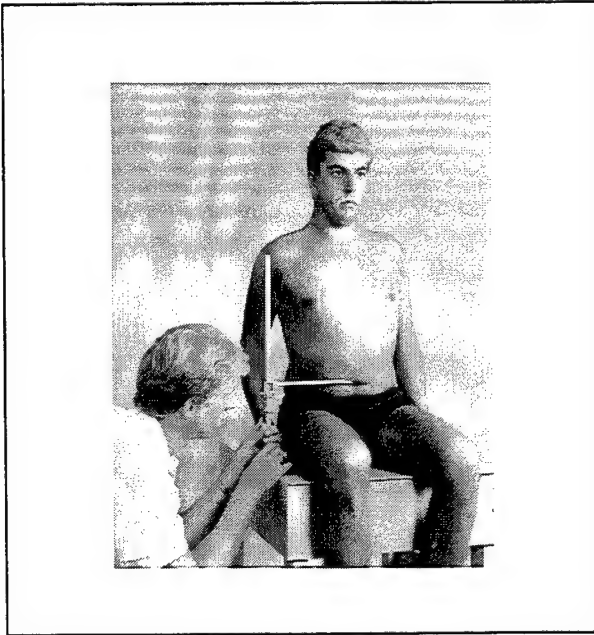
<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
290.7	Mean	11.44
0.6	SE(Mean)	0.02
16.7	StDev	0.66
0.4	SE(StDev)	0.02
241.0	Minimum	9.49
345.0	Maximum	13.58
Coefficient of Variation		
		5.8%
Symmetry---Veta I		
		0.08
Kurtosis---Veta II		
		3.08
Sample Size		
		736

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
251.8	1st	9.91
256.3	2nd	10.09
259.2	3rd	10.21
263.2	5th	10.36
269.4	10th	10.60
273.5	15th	10.77
276.7	20th	10.90
279.5	25th	11.00
282.0	30th	11.10
284.3	35th	11.19
286.4	40th	11.28
288.5	45th	11.36
290.6	50th	11.44
292.6	55th	11.52
294.7	60th	11.60
296.8	65th	11.69
299.1	70th	11.78
301.6	75th	11.87
304.4	80th	11.98
307.7	85th	12.11
312.0	90th	12.28
318.7	95th	12.55
323.4	97th	12.73
327.0	98th	12.87
333.0	99th	13.11



### **(63) Waist Height, Sitting (Omphalion)**

The vertical distance from a sitting surface to the center of the navel (omphalion) is measured with an anthropometer. The subject sits erect looking straight ahead. The knees are flexed 90 degrees. The measurement is made at the maximum point of quiet respiration.



**(63) Waist Height, Sitting (Omphalion)**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
231.8	Mean	9.12
0.6	SE(Mean)	0.02
14.1	StDev	0.56
0.4	SE(StDev)	0.02
190.0	Minimum	7.48
275.0	Maximum	10.83
Coefficient of Variation		
		6.1%
Symmetry----Veta I		
		0.03
Kurtosis----Veta II		
		3.10
Sample Size		582

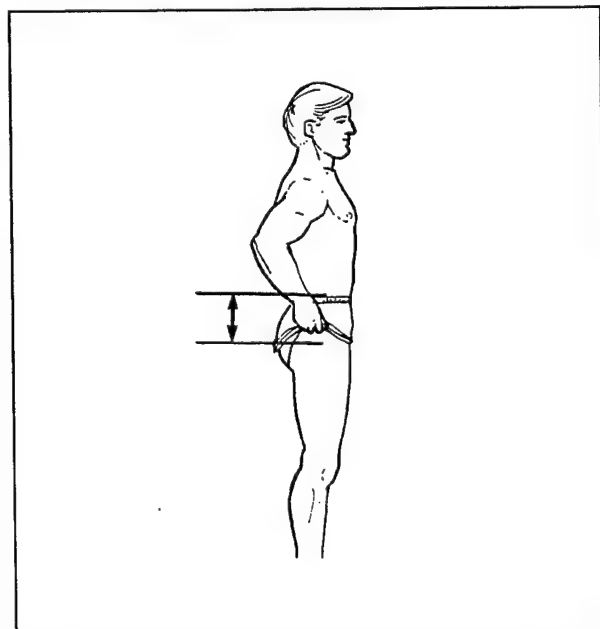
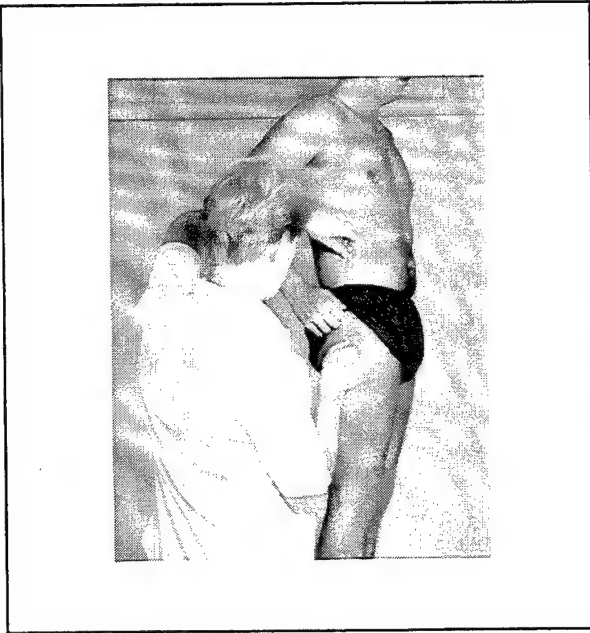
<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
197.8	1st	7.79
202.3	2nd	7.97
205.1	3rd	8.07
208.7	5th	8.22
214.0	10th	8.43
217.5	15th	8.56
220.2	20th	8.67
222.5	25th	8.76
224.5	30th	8.84
226.4	35th	8.91
228.2	40th	8.98
229.9	45th	9.05
231.6	50th	9.12
233.4	55th	9.19
235.1	60th	9.26
236.9	65th	9.33
238.8	70th	9.40
241.0	75th	9.49
243.3	80th	9.58
246.1	85th	9.69
249.7	90th	9.83
255.2	95th	10.05
258.8	97th	10.19
261.6	98th	10.30
265.9	99th	10.47

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
234.7	Mean	9.24
0.6	SE(Mean)	0.02
15.9	StDev	0.63
0.4	SE(StDev)	0.02
187.0	Minimum	7.36
281.0	Maximum	11.06
Coefficient of Variation		
		6.8%
Symmetry----Veta I		
		0.00
Kurtosis----Veta II		
		2.84
Sample Size		736

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
198.2	1st	7.80
202.7	2nd	7.98
205.4	3rd	8.09
209.1	5th	8.23
214.6	10th	8.45
218.3	15th	8.59
221.2	20th	8.71
223.8	25th	8.81
226.1	30th	8.90
228.3	35th	8.99
230.4	40th	9.07
232.4	45th	9.15
234.4	50th	9.23
236.5	55th	9.31
238.5	60th	9.39
240.7	65th	9.48
243.0	70th	9.57
245.5	75th	9.67
248.4	80th	9.78
251.6	85th	9.91
255.6	90th	10.06
261.4	95th	10.29
264.9	97th	10.43
267.4	98th	10.53
270.8	99th	10.66

## (64) Waist-Hip Length

The surface distance between the right waist (omphalion) landmark and the right lateral-buttock-point landmark on the side of the hip is measured with a tape. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet.



**(64) Waist-Hip Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
153.8	Mean	6.06
0.9	SE(Mean)	0.03
21.3	StDev	0.84
0.6	SE(StDev)	0.02
99.0	Minimum	3.90
214.0	Maximum	8.42
Coefficient of Variation		13.9%
Symmetry----Veta I		-0.00
Kurtosis----Veta II		2.58
Sample Size		582

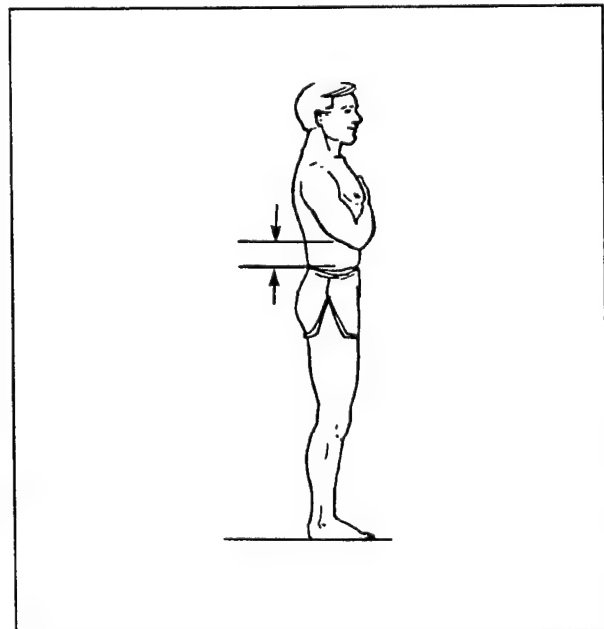
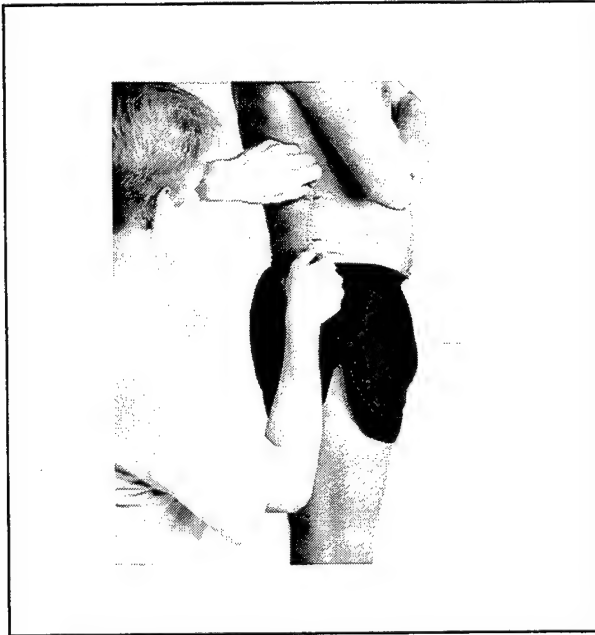
<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
107.5	1st	4.23
111.0	2nd	4.37
113.6	3rd	4.47
117.8	5th	4.64
125.1	10th	4.93
130.5	15th	5.14
134.8	20th	5.31
138.7	25th	5.46
142.2	30th	5.60
145.4	35th	5.72
148.4	40th	5.84
151.4	45th	5.96
154.2	50th	6.07
157.1	55th	6.18
159.9	60th	6.30
162.8	65th	6.41
165.8	70th	6.53
169.0	75th	6.65
172.5	80th	6.79
176.5	85th	6.95
181.3	90th	7.14
188.2	95th	7.41
192.5	97th	7.58
195.7	98th	7.70
200.7	99th	7.90

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
177.0	Mean	6.97
0.8	SE(Mean)	0.03
21.0	StDev	0.83
0.5	SE(StDev)	0.02
120.0	Minimum	4.72
241.0	Maximum	9.49
Coefficient of Variation		11.8%
Symmetry----Veta I		-0.03
Kurtosis----Veta II		2.87
Sample Size		738

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
125.4	1st	4.94
132.7	2nd	5.22
137.0	3rd	5.39
142.5	5th	5.61
150.4	10th	5.92
155.6	15th	6.12
159.6	20th	6.28
163.0	25th	6.42
166.1	30th	6.54
168.9	35th	6.65
171.6	40th	6.76
174.3	45th	6.86
176.9	50th	6.97
179.6	55th	7.07
182.3	60th	7.18
185.1	65th	7.29
188.1	70th	7.40
191.3	75th	7.53
194.9	80th	7.67
199.1	85th	7.84
204.3	90th	8.04
211.6	95th	8.33
216.0	97th	8.50
219.0	98th	8.62
223.1	99th	8.78

### **(65) Waist (Natural Indentation)-Waist (Omphalion) Length**

The surface distance between the right waist (natural indentation) and right waist (omphalion) landmarks is measured with a tape. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet.



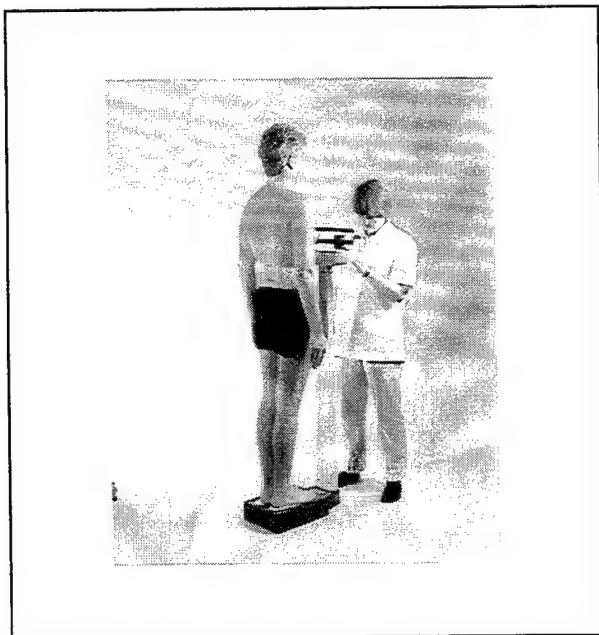
**(65) Waist (Natural Indentation)-Waist (Omphalion) Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
75.5	Mean	2.97
0.9	SE(Mean)	0.04
22.6	StDev	0.89
0.7	SE(StDev)	0.03
7.0	Minimum	0.28
149.0	Maximum	5.75
Coefficient of Variation		30.0%
Symmetry----Veta I		0.22
Kurtosis----Veta II		3.05
Sample Size		582
<b>Percentiles</b>		
Millimeters		Inches
22.5	1st	0.89
30.7	2nd	1.21
35.2	3rd	1.39
40.7	5th	1.60
48.3	10th	1.90
53.1	15th	2.09
56.9	20th	2.24
60.1	25th	2.37
63.1	30th	2.48
65.9	35th	2.59
68.6	40th	2.70
71.3	45th	2.81
74.1	50th	2.92
77.0	55th	3.03
79.9	60th	3.15
83.0	65th	3.27
86.4	70th	3.40
90.2	75th	3.55
94.5	80th	3.72
99.5	85th	3.92
105.9	90th	4.17
115.2	95th	4.53
120.7	97th	4.75
124.5	98th	4.90
129.5	99th	5.10

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
72.8	Mean	2.87
0.7	SE(Mean)	0.03
20.2	StDev	0.80
0.5	SE(StDev)	0.02
7.0	Minimum	0.28
142.0	Maximum	5.59
Coefficient of Variation		27.8%
Symmetry----Veta I		0.18
Kurtosis----Veta II		2.97
Sample Size		738
<b>Percentiles</b>		
Millimeters		Inches
27.9	1st	1.10
33.3	2nd	1.31
36.6	3rd	1.44
41.0	5th	1.61
47.5	10th	1.87
52.0	15th	2.05
55.5	20th	2.19
58.7	25th	2.31
61.5	30th	2.42
64.2	35th	2.53
66.7	40th	2.63
69.3	45th	2.73
71.8	50th	2.83
74.4	55th	2.93
77.1	60th	3.03
79.9	65th	3.14
82.8	70th	3.26
86.1	75th	3.39
89.8	80th	3.54
94.1	85th	3.70
99.5	90th	3.92
107.4	95th	4.23
112.3	97th	4.42
115.8	98th	4.56
120.9	99th	4.76

## **(66) Weight**

The weight of the subject is taken to the nearest tenth of a kilogram. The subject stands on the platform of a scale.



**(66) Weight**

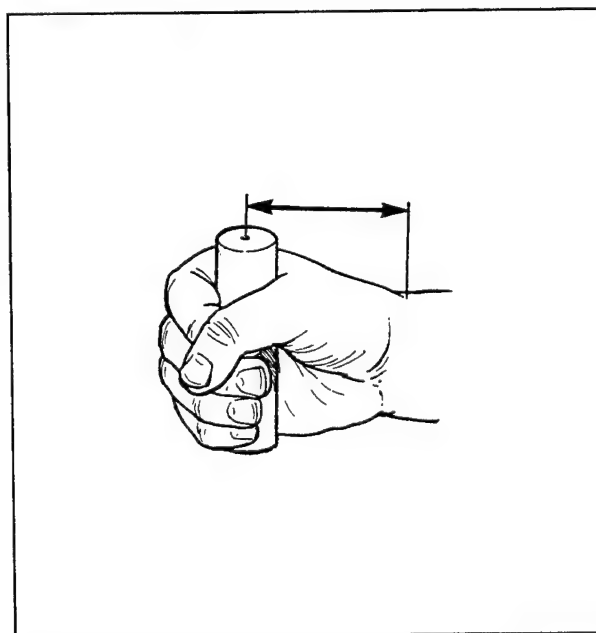
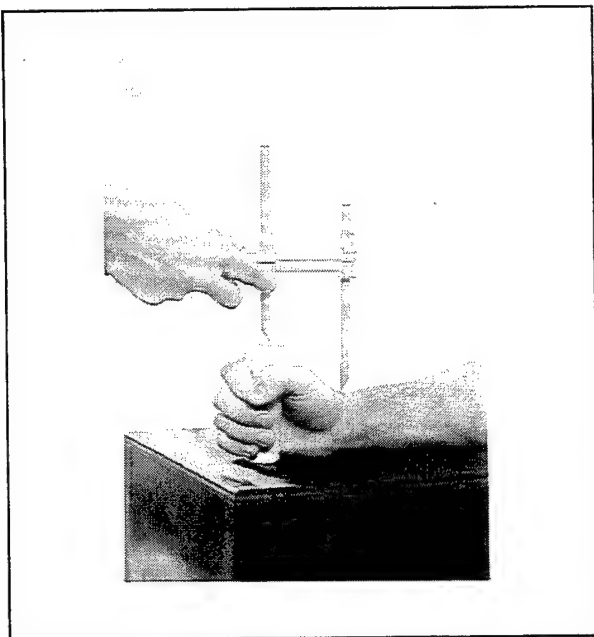
<b>Females</b>		
<u>Kilograms</u>		<u>Pounds</u>
62.5	Mean	137.65
0.3	SE(Mean)	0.79
8.7	StDev	19.32
0.2	SE(StDev)	0.57
38.9	Minimum	85.58
96.7	Maximum	212.74
Coefficient of Variation		1.4%
Symmetry----Veta I		0.05
Kurtosis----Veta II		0.36
Sample Size		582
<b>Percentiles</b>		
Kilograms		Pounds
44.3	1st	97.57
46.5	2nd	102.49
47.9	3rd	105.44
49.6	5th	109.25
52.2	10th	114.91
53.9	15th	118.67
55.3	20th	121.66
56.5	25th	124.32
57.6	30th	126.74
58.6	35th	129.03
59.6	40th	131.25
60.6	45th	133.47
61.7	50th	135.74
62.7	55th	138.07
63.8	60th	140.40
65.0	65th	143.08
66.3	70th	145.90
67.7	75th	149.07
69.4	80th	152.76
71.4	85th	157.21
74.1	90th	163.15
78.4	95th	172.50
81.3	97th	178.90
83.5	98th	183.79
87.1	99th	191.66

<b>Males</b>		
<u>Kilograms</u>		<u>Pounds</u>
80.6	Mean	177.32
0.4	SE(Mean)	0.88
11.5	StDev	25.30
0.3	SE(StDev)	0.66
52.9	Minimum	116.38
116.9	Maximum	257.18
Coefficient of Variation		1.4%
Symmetry----Veta I		0.03
Kurtosis----Veta II		0.28
Sample Size		738
<b>Percentiles</b>		
Kilograms		Pounds
56.4	1st	124.12
59.2	2nd	130.26
60.8	3rd	133.94
63.0	5th	138.80
66.4	10th	146.19
68.7	15th	151.27
70.6	20th	155.45
72.3	25th	159.17
73.9	30th	162.60
75.4	35th	165.88
76.8	40th	169.09
78.3	45th	172.26
79.7	50th	175.52
81.2	55th	178.82
82.8	60th	182.24
84.4	65th	185.88
86.2	70th	189.79
88.2	75th	194.08
90.4	80th	198.97
93.0	85th	204.69
96.3	90th	211.92
101.0	95th	222.38
103.9	97th	228.78
106.0	98th	233.20
108.8	99th	239.43



### (67) Wrist-Center of Grip Length

The horizontal distance between the stylium landmark on the right wrist and the center of a dowel (1-1/4" diameter) gripped in the right hand is measured with a Poech caliper. The subject sits grasping a dowel in the right hand. The base of the dowel is flush with the bottom of the fist. The subject puts the bottom of the fist on a flat surface in such a way that the base of the dowel rests on the surface. The fist is in line with the long axis of the forearm.



**(67) Wrist-Center of Grip Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
65.9	Mean	2.59
0.2	SE(Mean)	0.01
5.1	StDev	0.20
0.1	SE(StDev)	0.01
53.0	Minimum	2.09
81.0	Maximum	3.19
Coefficient of Variation		
		7.7%
Symmetry---Veta I		
		0.32
Kurtosis---Veta II		
		2.83
Sample Size		
		582

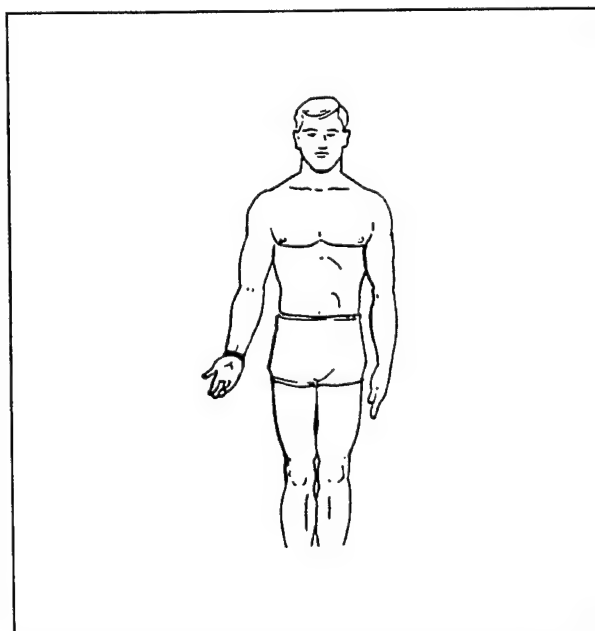
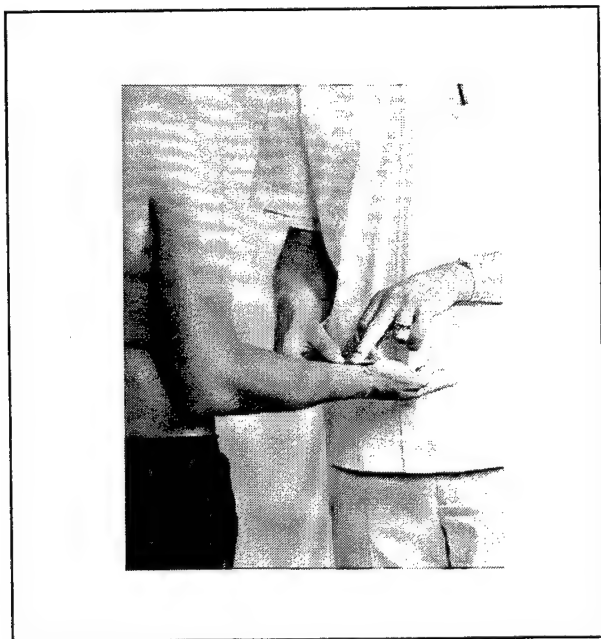
<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
55.5	1st	2.18
56.6	2nd	2.23
57.2	3rd	2.25
58.2	5th	2.29
59.6	10th	2.35
60.7	15th	2.39
61.5	20th	2.42
62.2	25th	2.45
62.9	30th	2.48
63.6	35th	2.50
64.2	40th	2.53
64.9	45th	2.55
65.5	50th	2.58
66.2	55th	2.61
66.8	60th	2.63
67.6	65th	2.66
68.3	70th	2.69
69.2	75th	2.72
70.2	80th	2.76
71.3	85th	2.81
72.8	90th	2.86
74.9	95th	2.95
76.3	97th	3.00
77.3	98th	3.04
78.8	99th	3.10

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
69.8	Mean	2.75
0.2	SE(Mean)	0.01
4.8	StDev	0.19
0.1	SE(StDev)	0.00
57.0	Minimum	2.24
85.0	Maximum	3.35
Coefficient of Variation		
		6.9%
Symmetry---Veta I		
		0.27
Kurtosis---Veta II		
		2.75
Sample Size		
		737

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
59.8	1st	2.36
60.9	2nd	2.40
61.5	3rd	2.42
62.4	5th	2.46
63.8	10th	2.51
64.8	15th	2.55
65.6	20th	2.58
66.3	25th	2.61
67.0	30th	2.64
67.7	35th	2.66
68.3	40th	2.69
68.9	45th	2.71
69.5	50th	2.74
70.2	55th	2.76
70.8	60th	2.79
71.5	65th	2.82
72.3	70th	2.85
73.1	75th	2.88
74.0	80th	2.91
75.1	85th	2.96
76.4	90th	3.01
78.3	95th	3.08
79.5	97th	3.13
80.3	98th	3.16
81.4	99th	3.20

## (68) Wrist Circumference

The circumference of the wrist perpendicular to the long axis of the forearm is measured with a tape passing over the stylium landmark on the wrist. The subject extends the right arm forward with the palm up.



**(68) Wrist Circumference**

<b>Females</b>			
<u>Millimeters</u>		<u>Inches</u>	
151.0	Mean	5.94	
0.3	SE(Mean)	0.01	
7.0	StDev	0.27	
0.2	SE(StDev)	0.01	
130.0	Minimum	5.12	
180.0	Maximum	7.09	
Coefficient of Variation		4.6%	
Symmetry----Veta I		0.23	
Kurtosis----Veta II		3.16	
Sample Size		582	

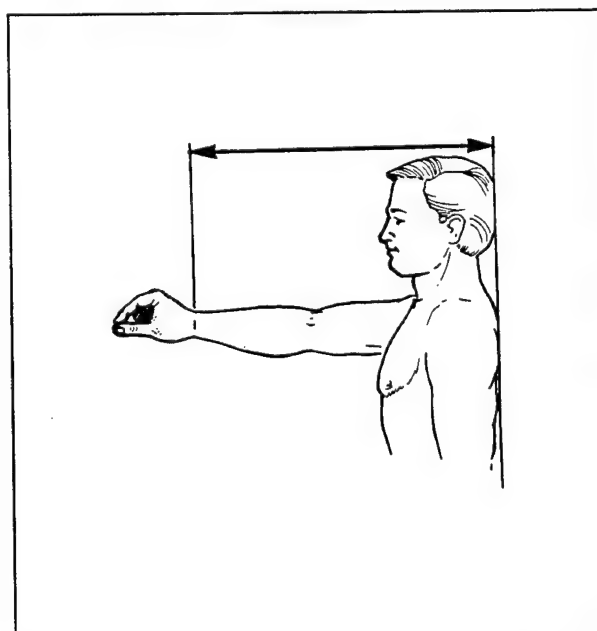
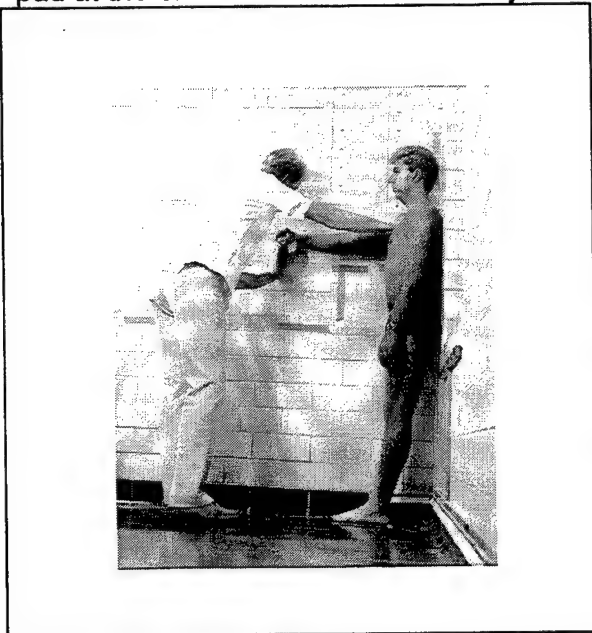
<b>Percentiles</b>		
Millimeters		Inches
136.1	1st	5.36
137.6	2nd	5.42
138.6	3rd	5.46
140.0	5th	5.51
142.2	10th	5.60
143.7	15th	5.66
144.9	20th	5.71
146.0	25th	5.75
147.0	30th	5.79
148.0	35th	5.83
148.9	40th	5.86
149.8	45th	5.90
150.7	50th	5.93
151.6	55th	5.97
152.5	60th	6.00
153.5	65th	6.04
154.5	70th	6.08
155.6	75th	6.13
156.9	80th	6.18
158.3	85th	6.23
160.1	90th	6.30
162.8	95th	6.41
164.4	97th	6.47
165.6	98th	6.52
167.3	99th	6.59

<b>Males</b>			
<u>Millimeters</u>		<u>Inches</u>	
175.4	Mean	6.91	
0.3	SE(Mean)	0.01	
8.5	StDev	0.34	
0.2	SE(StDev)	0.01	
147.0	Minimum	5.79	
204.0	Maximum	8.03	
Coefficient of Variation		4.9%	
Symmetry----Veta I		0.15	
Kurtosis----Veta II		3.04	
Sample Size		738	

<b>Percentiles</b>		
Millimeters		Inches
155.5	1st	6.12
158.4	2nd	6.24
160.0	3rd	6.30
162.1	5th	6.38
165.0	10th	6.50
166.9	15th	6.57
168.4	20th	6.63
169.7	25th	6.68
170.8	30th	6.72
171.9	35th	6.77
173.0	40th	6.81
174.0	45th	6.85
175.0	50th	6.89
176.1	55th	6.93
177.2	60th	6.98
178.4	65th	7.02
179.6	70th	7.07
181.0	75th	7.13
182.6	80th	7.19
184.5	85th	7.26
186.8	90th	7.36
190.3	95th	7.49
192.4	97th	7.57
193.8	98th	7.63
195.9	99th	7.71

### (69) Wrist-Wall Length

The horizontal distance between a back wall and the stylium landmark on the right wrist of the outstretched arm is measured on a wall scale. The subject stands erect in a corner looking straight ahead with the feet together and the heels 20 cm from the back wall. The buttocks and shoulders are against the wall. The right arm and hand with the palm down is stretched forward horizontally against a scale on the side wall. The thumb continues the horizontal line of the arm and the index finger curves around to touch the pad at the end of the thumb. The subject's right shoulder is held against the rear wall.



**(69) Wrist-Wall Length**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
614.2	Mean	24.18
1.3	SE(Mean)	0.05
32.3	StDev	1.27
0.9	SE(StDev)	0.04
508.0	Minimum	20.00
719.0	Maximum	28.31
Coefficient of Variation		5.3%
Symmetry----Veta I		0.18
Kurtosis----Veta II		3.22
Sample Size		580

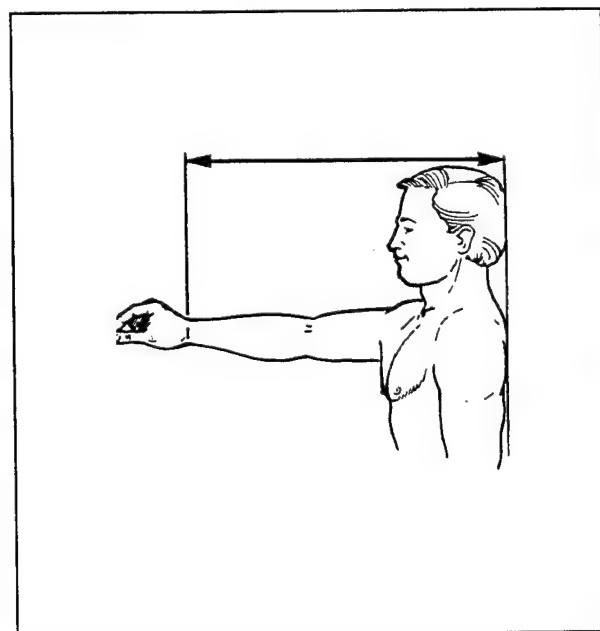
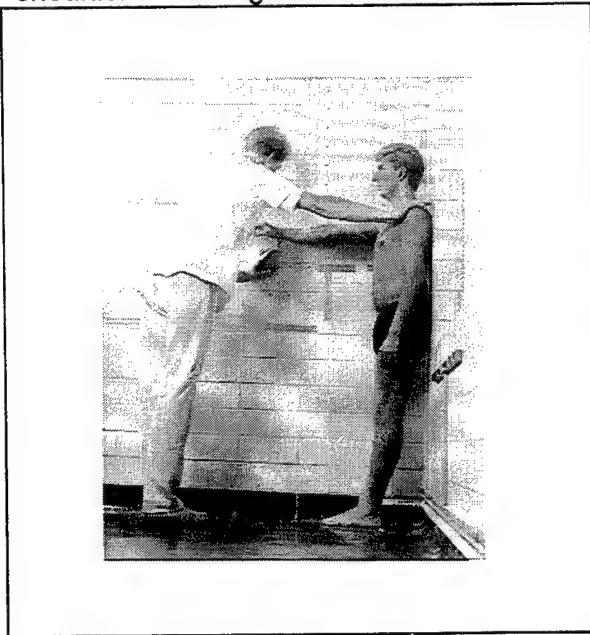
<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
539.5	1st	21.24
550.2	2nd	21.66
556.5	3rd	21.91
564.4	5th	22.22
575.5	10th	22.66
582.7	15th	22.94
588.2	20th	23.16
592.9	25th	23.34
597.2	30th	23.51
601.2	35th	23.67
605.0	40th	23.82
608.8	45th	23.97
612.6	50th	24.12
616.5	55th	24.27
620.4	60th	24.43
624.7	65th	24.59
629.2	70th	24.77
634.3	75th	24.97
640.1	80th	25.20
647.1	85th	25.48
656.2	90th	25.83
670.1	95th	26.38
679.4	97th	26.75
686.4	98th	27.02
697.2	99th	27.45

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
680.6	Mean	26.79
1.2	SE(Mean)	0.05
33.3	StDev	1.31
0.9	SE(StDev)	0.03
565.0	Minimum	22.24
789.0	Maximum	31.06
Coefficient of Variation		4.9%
Symmetry----Veta I		0.14
Kurtosis----Veta II		2.93
Sample Size		733

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
610.8	1st	24.05
617.5	2nd	24.31
622.1	3rd	24.49
628.5	5th	24.74
639.0	10th	25.16
646.4	15th	25.45
652.5	20th	25.69
657.8	25th	25.90
662.6	30th	26.09
667.1	35th	26.26
671.4	40th	26.43
675.7	45th	26.60
679.9	50th	26.77
684.1	55th	26.93
688.4	60th	27.10
692.9	65th	27.28
697.6	70th	27.47
702.8	75th	27.67
708.6	80th	27.90
715.4	85th	28.17
724.0	90th	28.50
736.8	95th	29.01
745.1	97th	29.34
751.3	98th	29.58
761.0	99th	29.96

**(70) Wrist-Wall Length, Extended**

The horizontal distance between a back wall and the stylium landmark on the right wrist of the maximally outstretched arm is measured on a wall scale. The subject stands erect in a corner looking straight ahead with the feet together and the heels 20 cm from the back wall. The buttocks and the left shoulder are against the wall. The right arm and hand with the palm down are stretched forward horizontally as far as possible against the side wall. The thumb continues the horizontal line of the arm and the index finger curves around to touch the pad at the end of the thumb. The subject's left shoulder is held against the rear wall.



**(70) Wrist-Wall Length, Extended**

<b>Females</b>		
<u>Millimeters</u>		<u>Inches</u>
675.1	Mean	26.58
1.5	SE(Mean)	0.06
35.2	StDev	1.39
1.0	SE(StDev)	0.04
560.0	Minimum	22.05
821.0	Maximum	32.32
Coefficient of Variation		5.2%
Symmetry---Veta I		0.26
Kurtosis---Veta II		3.59
Sample Size		580

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
593.6	1st	23.37
604.1	2nd	23.78
610.5	3rd	24.04
618.9	5th	24.37
631.4	10th	24.86
639.6	15th	25.18
646.0	20th	25.43
651.5	25th	25.65
656.4	30th	25.84
661.0	35th	26.02
665.4	40th	26.20
669.6	45th	26.36
673.9	50th	26.53
678.2	55th	26.70
682.5	60th	26.87
687.1	65th	27.05
692.1	70th	27.25
697.5	75th	27.46
703.6	80th	27.70
710.9	85th	27.99
720.5	90th	28.36
735.1	95th	28.94
745.0	97th	29.33
752.5	98th	29.63
764.6	99th	30.10

<b>Males</b>		
<u>Millimeters</u>		<u>Inches</u>
748.5	Mean	29.47
1.4	SE(Mean)	0.05
37.0	StDev	1.46
1.0	SE(StDev)	0.04
630.0	Minimum	24.80
878.0	Maximum	34.57
Coefficient of Variation		4.9%
Symmetry---Veta I		0.12
Kurtosis---Veta II		3.06
Sample Size		733

<b>Percentiles</b>		
<u>Millimeters</u>		<u>Inches</u>
668.2	1st	26.31
674.5	2nd	26.56
679.4	3rd	26.75
686.9	5th	27.04
699.8	10th	27.55
709.1	15th	27.92
716.5	20th	28.21
723.0	25th	28.47
728.8	30th	28.69
734.1	35th	28.90
739.1	40th	29.10
743.9	45th	29.29
748.5	50th	29.47
753.2	55th	29.65
757.8	60th	29.83
762.5	65th	30.02
767.5	70th	30.21
772.8	75th	30.42
778.7	80th	30.66
785.7	85th	30.93
794.7	90th	31.29
809.0	95th	31.85
819.2	97th	32.25
827.4	98th	32.57
841.8	99th	33.14



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## **CHAPTER III**

### **CORRELATIONS**

## Male Correlation Coefficients

		1	2	3	4	5	6	7	8	9	10
1	Ab Ext Depth, S		.289	.437	.561	.628	.575	.761	.171	.394	.325
2	Acromial Ht Sitting	.289		.428	.234	.387	.331	.463	.476	.476	.433
3	Ankle Circ	.437	.438		.553	.568	.403	.677	.311	.427	.321
4	Biceps C Flex	.561	.234	.553		.761	.514	.715	.202	.419	.310
5	Bideltoid Bdth S	.628	.387	.568	.761		.567	.766	.342	.517	.427
6	Bustpt-Bustpt Bdth	.575	.331	.403	.514	.567		.582	.261	.367	.309
7	Buttock Circ	.761	.463	.677	.715	.766	.582		.353	.597	.495
8	Buttock Height	.171	.476	.311	.202	.342	.261	.353		.856	.860
9	Buttock-Knee Lgth	.394	.476	.427	.419	.517	.367	.597	.856		.969
10	Buttock-Pop Lgth	.325	.433	.321	.310	.427	.309	.495	.860	.969	
11	Calf Circumference	.552	.339	.802	.706	.676	.486	.764	.218	.398	.266
12	Calf Height	.172	.400	.200	.214	.297	.197	.330	.827	.765	.738
13	Chest Circ	.753	.381	.570	.751	.839	.704	.813	.283	.492	.401
14	Chest Circ at Scye	.697	.388	.584	.779	.879	.658	.792	.309	.505	.410
15	Chest Depth	.772	.306	.517	.684	.705	.638	.779	.239	.454	.369
16	Crotch Height	.036	.448	.246	.142	.255	.153	.261	.928	.839	.843
17	Crotch Length, O	.497	.515	.556	.461	.596	.386	.679	.332	.471	.394
18	Crotch Lgth Pos, O	.185	.421	.394	.254	.339	.132	.420	.280	.385	.342
19	Elbow Circ	.601	.451	.667	.824	.757	.543	.774	.396	.565	.453
20	Elbow Rest Height	.196	.747	.273	.145	.191	.160	.262	*-.078	-.038	*-.076
21	Eye Height, Sitting	.128	.853	.372	.178	.334	.187	.366	.487	.468	.437
22	Forearm Circ, Flex	.497	.333	.596	.834	.711	.467	.650	.292	.452	.346
23	Forearm-Forearm B	.628	.319	.529	.752	.839	.558	.726	.224	.429	.337
24	Forearm-Hand Lgth	.166	.476	.374	.265	.378	.274	.382	.814	.733	.709
25	Functional Leg Lgth	.297	.509	.410	.329	.450	.345	.502	.924	.923	.902
26	Gluteal Furrow Hght	.139	.462	.294	.193	.330	.240	.315	.950	.844	.845
27	Head Circ	.351	.340	.417	.369	.441	.293	.464	.272	.331	.263
28	Hip Breadth, Sitting	.679	.462	.641	.638	.692	.551	.936	.392	.594	.508
29	Interscye II	.336	.215	.406	.477	.660	.277	.469	.215	.346	.280
30	Knee Circ	.621	.487	.745	.668	.669	.523	.851	.397	.553	.428
31	Knee Height, Mid	.181	.479	.338	.235	.347	.262	.379	.918	.817	.805
32	Knee Height, Sitting	.241	.533	.439	.316	.429	.316	.480	.922	.853	.824
33	Lateral Malleolus H	.173	.408	.327	.194	.261	.214	.314	.434	.411	.369
34	Lower Thigh Circ	.635	.417	.751	.707	.672	.529	.857	.281	.468	.343
35	Neck Bustpt Lgth	.563	.432	.505	.528	.586	.550	.662	.318	.471	.409
36	Neck Circ	.605	.390	.519	.676	.703	.482	.675	.246	.410	.309
37	Neck Circ, Base	.554	.389	.506	.604	.677	.448	.642	.277	.405	.319
38	Ovrhd Fngtrp Rch E	.177	.633	.383	.219	.407	.292	.403	.894	.835	.821
39	Ovrhd Fngtrp Rch S	.228	.707	.422	.252	.473	.352	.465	.759	.734	.710
40	Popliteal Height	.046	.456	.253	.107	.261	.170	.247	.913	.759	.776

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		1	2	3	4	5	6	7	8	9	10
41	Scye Circ	.654	.469	.614	.787	.776	.566	.775	.382	.555	.454
42	Scye Depth	.373	.274	.377	.385	.452	.336	.486	.322	.416	.358
43	Shoulder Circ	.625	.362	.587	.782	.934	.590	.764	.358	.530	.432
44	Shoulder Lgth	.011	.022	.096	.084	.326	.089	.138	.272	.276	.272
45	Sitting Height	.129	.859	.394	.190	.351	.203	.381	.495	.479	.446
46	Siv Lgth Spine-El	.346	.491	.448	.416	.664	.422	.550	.667	.729	.681
47	Siv Lgth Spine-Sc	.378	.326	.392	.467	.657	.321	.482	.217	.370	.304
48	Siv Lgth Spine-Wr	.314	.518	.446	.401	.613	.411	.537	.778	.796	.756
49	Sleeve Outseam	.181	.499	.315	.201	.361	.297	.368	.813	.755	.742
50	Span	.173	.494	.368	.244	.442	.312	.394	.846	.773	.758
51	Stature	.193	.725	.414	.244	.410	.288	.435	.885	.830	.815
52	Tenth Rib Hght	.226	.627	.405	.237	.403	.304	.431	.928	.851	.840
53	Thigh Circ	.718	.344	.652	.762	.753	.528	.932	.260	.507	.399
54	Thigh Clearance	.674	.354	.586	.703	.687	.463	.805	.226	.467	.351
55	Thumbtip Reach	.234	.473	.363	.262	.388	.313	.417	.800	.757	.735
56	Vert Trnk Circ USA	.662	.785	.618	.558	.686	.546	.795	.474	.618	.542
57	Waist Back Lgth, O	.512	.666	.395	.313	.430	.468	.551	.426	.481	.446
58	Waist Circ, NI	.902	.358	.533	.662	.760	.654	.832	.242	.456	.368
59	Waist Circ, O	.912	.390	.548	.635	.723	.630	.878	.259	.494	.408
60	Waist Front Lgth, O	.554	.619	.416	.372	.449	.457	.560	.344	.433	.395
61	Waist Hght, NI	.274	.604	.417	.273	.431	.315	.485	.936	.883	.867
62	Waist Hght Sit, NI	.382	.688	.435	.296	.201	.299	.533	.355	.376	.317
63	Waist Hght Sit, O	-.110	.528	.283	.103	.435	-.028	.214	.263	.281	.246
64	Waist Hip Lgth	-.217	.334	.149	-.006	.071	-.135	.033	*.091	.214	.182
65	Waist NI Waist O Lg	.590	.160	.232	.296	.309	.384	.463	.112	.189	.164
66	Weight	.773	.552	.727	.781	.847	.636	.936	.474	.676	.569
67	Wrist Cen Grip Lgth	.154	.232	.290	.241	.240	.135	.231	.267	.226	.194
68	Wrist Circ	.463	.527	.690	.575	.599	.415	.607	.422	.510	.406
69	Wrist Wall Lgth	.240	.455	.346	.266	.385	.313	.421	.782	.752	.731
70	Wrist Wall Lgth, Ex	.232	.746	.356	.243	.388	.337	.427	.763	.726	.708

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		11	12	13	14	15	16	17	18	19	20
1	Ab Ext Depth, S	.552	.172	.753	.697	.772	.036	.497	.185	.601	.196
2	Acromial Ht Sitting	.339	.400	.381	.388	.306	.448	.515	.421	.451	.747
3	Ankle Circ	.802	.200	.570	.584	.517	.246	.556	.394	.669	.273
4	Biceps C Flex	.706	.214	.751	.779	.684	.142	.461	.254	.824	.145
5	Bideloid Bdth S	.676	.297	.839	.879	.705	.255	.596	.339	.757	.191
6	Bustpt-Bustpt Bdth	.486	.197	.704	.658	.638	.153	.386	.132	.543	.160
7	Buttock Circ	.764	.330	.813	.792	.779	.261	.679	.420	.774	.262
8	Buttock Height	.218	.827	.283	.309	.239	.928	.332	.280	.396	*-.078
9	Buttock-Knee Lgth	.398	.765	.492	.505	.454	.839	.471	.385	.565	-.038
10	Buttock-Pop Lgth	.266	.738	.401	.410	.369	.843	.395	.342	.453	*-.076
11	Calf Circumference		.164	.671	.684	.618	.147	.536	.312	.731	.218
12	Calf Height	.164		.231	.260	.217	.841	.265	.226	.366	-.110
13	Chest Circ	.671	.231		.965	.898	.180	.606	.321	.752	.232
14	Chest Circ at Scye	.684	.260	.965		.847	.213	.615	.340	.780	.220
15	Chest Depth	.618	.217	.898	.847		.139	.544	.247	.689	.179
16	Crotch Height	.147	.841	.180	.213	.139		.247	.276	.314	-.118
17	Crotch Length, O	.536	.265	.606	.615	.544	.247		.711	.564	.372
18	Crotch Lgth Pos, O	.312	.226	.321	.340	.247	.276	.711		.330	.309
19	Elbow Circ	.731	.366	.752	.780	.689	.314	.564	.330		.220
20	Elbow Rest Height	.218	-.110	.232	.220	.179	-.112	.372	.309	.220	
21	Eye Height, Sitting	.280	.417	.233	.272	.167	.486	.450	.421	.385	.566
22	Forearm Circ, Flex	.699	.292	.691	.739	.611	.230	.486	.280	.890	.163
23	Forearm-Forearm B	.639	.190	.832	.839	.726	.148	.531	.265	.716	.234
24	Forearm-Hand Lgth	.293	.754	.298	.335	.243	.794	.357	.290	.470	-.060
25	Functional Leg Lgth	.341	.827	.416	.430	.376	.905	.440	.355	.505	-.045
26	Gluteal Furrow Hght	.208	.852	.268	.302	.220	.939	.310	.253	.373	-.103
27	Head Circ	.394	.246	.458	.470	.404	.206	.403	.268	.475	.211
28	Hip Breadth, Sitting	.709	.342	.741	.710	.710	.307	.581	.357	.709	.232
29	Interscye II	.458	.187	.584	.635	.465	.176	.402	.279	.476	.104
30	Knee Circ	.767	.353	.705	.700	.668	.307	.606	.399	.787	.268
31	Knee Height, Mid	.254	.862	.296	.322	.259	.907	.345	.282	.417	-.067
32	Knee Height, Sitting	.359	.864	.375	.407	.331	.907	.425	.334	.517	-.020
33	Lateral Malleolus H	.279	.466	.218	.242	.208	.444	.296	.216	.368	.148
34	Lower Thigh Circ	.805	.243	.715	.708	.680	.187	.607	.395	.774	.273
35	Neck Bustpt Lgth	.522	.285	.667	.642	.623	.258	.450	.270	.602	.224
36	Neck Circ	.568	.242	.712	.728	.645	.150	.524	.285	.721	.270
37	Neck Circ, Base	.547	.249	.664	.685	.588	.179	.510	.288	.669	.254
38	Ovrhd Fngtrp Rch E	.288	.790	.326	.365	.260	.896	.424	.365	.444	.054
39	Ovrhd Fngtrp Rch S	.348	.658	.391	.425	.315	.744	.486	.395	.468	.190
40	Popliteal Height	.144	.846	.181	.220	.133	.918	.285	.252	.313	*-.092

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		11	12	13	14	15	16	17	18	19	20
41	Scye Circ	.663	.663	.819	.826	.745	.296	.571	.330	.824	.224
42	Scye Depth	.365	.365	.424	.420	.423	.273	.351	.217	.450	.015
43	Shoulder Circ	.688	.688	.860	.908	.742	.269	.595	.327	.778	.145
44	Shoulder Lgth	.114	.114	.110	.168	.079	.281	.115	*.088	.119	-.199
45	Sitting Height	.288	.288	.250	.289	.188	.494	.462	.431	.401	.568
46	Slv Lgth Spine-El	.447	.447	.565	.608	.449	.645	.454	.296	.568	-.038
47	Slv Lgth Spine-Sc	.443	.443	.594	.635	.466	.205	.386	.200	.503	.180
48	Slv Lgth Spine-Wr	.420	.420	.520	.561	.417	.757	.461	.329	.574	-.058
49	Sleeve Outseam	.256	.256	.302	.326	.251	.809	.314	.258	.392	-.126
50	Span	.297	.297	.329	.375	.243	.828	.379	.311	.440	-.107
51	Stature	.295	.768	.328	.364	.268	.873	.472	.414	.478	.207
52	Tenth Rib Hght	.299	.799	.349	.382	.301	.897	.488	.407	.454	.100
53	Thigh Circ	.787	.262	.777	.767	.750	.171	.613	.361	.739	.214
54	Thigh Clearance	.701	.242	.697	.702	.679	.154	.561	.322	.700	.246
55	Thumbtip Reach	.294	.730	.352	.375	.307	.777	.361	.292	.462	*.087
56	Vert Trnk Circ USA	.605	.405	.726	.715	.668	.382	.744	.479	.716	.539
57	Waist Back Lgth, O	.365	.363	.459	.429	.452	.346	.270	*.082	.476	.390
58	Waist Circ, NI	.633	.208	.885	.837	.839	.109	.573	.251	.697	.231
59	Waist Circ, O	.640	.236	.848	.790	.825	.137	.588	.279	.686	.245
60	Waist Front Lgth, O	.398	.309	.480	.468	.481	.268	.292	.115	.523	.410
61	Waist Hght, NI	.314	.825	.375	.401	.333	.905	.472	.377	.488	.062
62	Waist Hght Sit, NI	.372	.300	.396	.408	.381	.280	.529	.359	.453	.530
63	Waist Hght Sit, O	.175	.230	.092	.137	.051	.296	.555	.574	.210	.418
64	Waist Hip Lgth	.051	.211	-.256	.028	-.081	.288	.447	.536	.060	.215
65	Waist NI Waist O Lg	.298	.102	.390	.342	.448	-.008	.007	-.234	.344	.109
66	Weight	.794	.422	.879	.874	.823	.374	.695	.415	.861	.284
67	Wrist Cen Grip Lgth	.227	.229	.163	.183	.145	.214	.213	.176	.335	.117
68	Wrist Circ	.601	.405	.570	.600	.519	.362	.506	.322	.780	.254
69	Wrist Wall Lgth	.286	.715	.367	.387	.327	.762	.359	.282	.450	-.097
70	Wrist Wall Lgth, Ex	.288	.661	.380	.397	.343	.725	.381	.300	.434	-.100

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		21	22	23	24	25	26	27	28	29	30
1	Ab Ext Depth, S	.128	.497	.628	.166	.297	.139	.351	.679	.336	.621
2	Acromial Ht, Sitting	.853	.333	.319	.476	.509	.474	.340	.462	.215	.487
3	Ankle Circ	.372	.596	.529	.374	.410	.544	.417	.641	.406	.745
4	Biceps C Flex	.178	.834	.752	.265	.329	.413	.369	.638	.477	.668
5	Bideloid Bdth S	.334	.711	.839	.378	.450	.330	.441	.692	.660	.669
6	Bustpt-Bustpt Bdth	.187	.467	.558	.274	.345	.240	.293	.551	.277	.523
7	Buttock Circ	.366	.650	.726	.382	.502	.315	.464	.936	.469	.851
8	Buttock Height	.487	.292	.224	.814	.924	.950	.272	.392	.215	.397
9	Buttock-Knee Lgth	.468	.452	.429	.733	.923	.844	.331	.594	.346	.553
10	Buttock-Pop Lgth	.437	.346	.337	.709	.902	.845	.263	.508	.280	.428
11	Calf Circumference	.280	.699	.639	.293	.341	.208	.394	.709	.458	.767
12	Calf Height	.417	.292	.190	.754	.827	.852	.246	.342	.187	.353
13	Chest Circ	.233	.691	.832	.298	.416	.268	.458	.741	.584	.705
14	Chest Circ at Scye	.272	.739	.839	.335	.430	.302	.470	.710	.635	.700
15	Chest Depth	.167	.611	.726	.243	.376	.220	.404	.710	.465	.668
16	Crotch Height	.486	.230	.148	.794	.905	.939	.206	.307	.176	.307
17	Crotch Length, O	.450	.486	.531	.357	.440	.310	.403	.581	.402	.606
18	Crotch Lgth Pos, O	.421	.280	.265	.290	.355	.253	.268	.357	.279	.399
19	Elbow Circ	.385	.890	.716	.470	.505	.373	.475	.709	.476	.787
20	Elbow Rest Height	.566	.163	.234	-.060	-.045	-.103	.211	.232	.104	.268
21	Eye Height, Sitting		.282	.197	.491	.509	.483	.302	.384	.256	.396
22	Forearm Circ, Flex	.282		.669	.373	.398	.287	.414	.568	.479	.652
23	Forearm-Forearm B	.197	.669		.250	.349	.218	.367	.649	.526	.637
24	Forearm-Hand Lgth	.491	.373	.250		.803	.820	.327	.395	.240	.440
25	Functional Leg Lgth	.509	.398	.349	.803		.916	.313	.518	.281	.508
26	Gluteal Furrow Hght	.483	.287	.218	.820	.916		.248	.339	.228	.359
27	Head Circ	.302	.414	.367	.327	.313	.248		.427	.349	.473
28	Hip Breadth, Sitting	.384	.568	.649	.395	.518	.339	.427		.411	.828
29	Interscye II	.256	.479	.526	.240	.281	.228	.349	.411		.424
30	Knee Circ	.396	.652	.637	.440	.508	.359	.473	.828	.424	
31	Knee Height, Mid	.486	.322	.246	.822	.903	.920	.278	.403	.235	.432
32	Knee Height, Sitting	.537	.405	.322	.859	.929	.927	.348	.496	.277	.543
33	Lateral Malleolus H	.392	.251	.201	.381	.456	.453	.200	.310	.106	.361
34	Lower Thigh Circ	.320	.660	.656	.349	.409	.245	.448	.819	.425	.963
35	Neck Bustpt Lgth	.373	.499	.575	.329	.420	.301	.373	.652	.387	.607
36	Neck Circ	.288	.686	.655	.296	.352	.241	.521	.561	.518	.601
37	Neck Circ, Base	.335	.624	.608	.323	.356	.263	.499	.531	.532	.563
38	Ovrhd Fngtrp Rch E	.668	.338	.265	.861	.898	.902	.315	.433	.279	.432
39	Ovrhd Fngtrp Rch S	.735	.368	.319	.789	.779	.765	.353	.482	.318	.466
40	Popliteal Height	.502	.228	.136	.822	.868	.929	.247	.273	.176	.278

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		21	22	23	24	25	26	27	28	29	30
41	Scye Circ	.335	.757	.755	.400	.496	.361	.429	.702	.437	.710
42	Scye Depth	.349	.357	.381	.325	.394	.293	.274	.492	.406	.427
43	Shoulder Circ	.324	.746	.800	.394	.466	.357	.460	.677	.693	.679
44	Shoulder Lgth	.235	.110	.112	.285	.276	.281	.098	.155	.424	.100
45	Sitting Height	.977	.293	.211	.497	.520	.492	.357	.340	.279	.417
46	Slv Lgth Spine-El	.518	.488	.511	.644	.722	.676	.358	.556	.512	.512
47	Slv Lgth Spine-Sc	.293	.501	.569	.236	.308	.226	.310	.440	.602	.415
48	Slv Lgth Spne-Wr	.544	.486	.465	.814	.819	.787	.361	.540	.447	.521
49	Sleeve Outseam	.507	.304	.223	.849	.814	.822	.256	.399	.213	.405
50	Span	.548	.346	.272	.920	.839	.848	.320	.417	.303	.418
51	Stature	.784	.350	.273	.797	.888	.880	.360	.466	.283	.480
52	Tenth Rib Hght	.628	.338	.281	.808	.918	.918	.327	.450	.282	.475
53	Thigh Circ	.247	.654	.721	.293	.409	.243	.430	.873	.460	.817
54	Thigh Clearance	.256	.643	.658	.266	.375	.210	.387	.685	.404	.724
55	Thumbtip Reach	.479	.363	.297	.848	.804	.804	.294	.433	.315	.455
56	Vert Trnk Circ USA	.665	.585	.622	.489	.583	.440	.474	.741	.401	.736
57	Waist Back Lgth, O	.624	.331	.377	.416	.476	.399	.338	.579	.288	.508
58	Waist Circ, NI	.195	.610	.755	.241	.372	.216	.462	.745	.479	.694
59	Waist Circ, O	.236	.570	.724	.259	.404	.230	.437	.818	.440	.736
60	Waist Front Lgth, O	.599	.397	.405	.316	.405	.326	.298	.559	.250	.529
61	Waist Hght, NI	.599	.368	.317	.820	.935	.926	.345	.503	.284	.505
62	Waist Hght Sit, NI	.631	.356	.361	.335	.380	.320	.368	.508	.290	.511
63	Waist Hght Sit, O	.567	.174	.118	.273	.289	.252	.164	.180	.167	.238
64	Waist Hip Lgth	.415	.071	.004	.220	.222	.210	.054	.007	.140	.056
65	Waist NI Waist O Lg	.035	.245	.345	*.081	.150	*.076	.228	.455	.126	.380
66	Weight	.450	.758	.785	.496	.607	.450	.536	.874	.550	.863
67	Wrist Cen Grip Lgth	.198	.288	.200	.370	.257	.242	.231	.229	.148	.310
68	Wrist Circ	.475	.704	.537	.545	.505	.406	.476	.558	.399	.690
69	Wrist Wall Lgth	.456	.357	.310	.804	.792	.792	.274	.436	.316	.447
70	Wrist Wall Lgth Ex	.449	.328	.306	.797	.773	.758	.319	.448	.299	.447

\* Correlation not significant at  $p \leq .05$



## Male Correlation Coefficients

		31	32	33	34	35	36	37	38	39	40
1	Ab Ext Depth, S	.182	.241	.173	.635	.563	.605	.554	.177	.228	.046
2	Acromial Ht, Sitting	.479	.533	.408	.417	.432	.390	.388	.633	.707	.456
3	Ankle Circ	.745	.439	.327	.751	.505	.519	.506	.383	.421	.253
4	Biceps C Flex	.235	.316	.194	.706	.528	.676	.604	.219	.252	.107
5	Bideltoid Bdth S	.347	.429	.261	.672	.586	.703	.677	.407	.473	.261
6	Bustpt-Bustpt Bdth	.262	.316	.214	.529	.550	.482	.448	.292	.352	.170
7	Buttock Circ	.379	.480	.314	.857	.662	.675	.643	.403	.465	.247
8	Buttock Height	.918	.922	.434	.281	.318	.246	.277	.894	.759	.913
9	Buttock-Knee Lgth	.817	.853	.411	.468	.471	.410	.405	.835	.734	.759
10	Buttock-Pop Lgth	.805	.824	.369	.343	.409	.309	.319	.821	.710	.776
11	Calf Circumference	.254	.359	.279	.805	.522	.568	.547	.288	.341	.144
12	Calf Height	.862	.864	.466	.243	.285	.242	.249	.790	.658	.846
13	Chest Circ	.296	.375	.218	.715	.667	.712	.664	.326	.391	.181
14	Chest Circ at Scye	.322	.407	.242	.708	.642	.728	.685	.365	.425	.220
15	Chest Depth	.259	.331	.208	.680	.623	.645	.588	.260	.315	.133
16	Crotch Height	.907	.908	.444	.187	.258	.150	.179	.896	.744	.918
17	Crotch Length, O	.345	.425	.296	.607	.450	.524	.510	.424	.486	.285
18	Crotch Lgth Pos, O	.282	.334	.216	.395	.270	.285	.288	.365	.395	.252
19	Elbow Circ	.417	.517	.368	.774	.602	.721	.669	.444	.468	.313
20	Elbow Rest Height	-.067	-.020	.148	.273	.224	.270	.254	.054	.190	*-.092
21	Eye Height, Sitting	.486	.537	.392	.320	.373	.288	.335	.668	.735	.502
22	Forearm Circ, Flex	.322	.405	.251	.660	.499	.686	.624	.338	.368	.228
23	Forearm-Forearm B	.246	.322	.201	.656	.575	.655	.608	.265	.319	.136
24	Forearm-Hand Lgth	.822	.859	.381	.349	.329	.296	.323	.861	.789	.822
25	Functional Leg Lgth	.903	.929	.456	.409	.420	.352	.356	.898	.779	.868
26	Gluteal Furrow Hght	.920	.927	.453	.245	.301	.241	.263	.902	.765	.929
27	Head Circ	.278	.348	.200	.448	.373	.521	.499	.315	.647	.583
28	Hip Breadth, Sitting	.403	.496	.310	.819	.652	.561	.531	.433	.482	.273
29	Interscye II	.235	.277	.106	.425	.387	.518	.532	.279	.318	.176
30	Knee Circ	.432	.543	.361	.963	.607	.601	.563	.432	.466	.278
31	Knee Height, Mid		.961	.514	.314	.343	.271	.283	.880	.739	.926
32	Knee Height, Sitting	.961		.537	.441	.411	.343	.357	.908	.787	.934
33	Lateral Malleolus H	.514	.537		.310	.300	.196	.223	.451	.406	.477
34	Lower Thigh Circ	.314	.441	.310		.599	.602	.565	.320	.376	.162
35	Neck Bustpt Lgth	.343	.411	.300	.599		.533	.493	.392	.431	.250
36	Neck Circ	.271	.343	.196	.602	.533		.911	.287	.330	.181
37	Neck Circ, Base	.283	.357	.223	.565	.493	.911		.315	.359	.223
38	Ovrhd Fngtrp Rch E	.880	.908	.451	.320	.392	.287	.315		.920	.886
39	Ovrhd Fngtrp Rch S	.739	.787	.406	.376	.431	.330	.359	.920		.749
40	Popliteal Height	.926	.934	.477	.162	.250	.181	.223	.886	.749	

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		31	32	33	34	35	36	37	38	39	40
41	Scye Circ	.385	.470	.327	.706	.641	.719	.672	.420	.451	.287
42	Scye Depth	.318	.357	.193	.404	.499	.434	.402	.365	.394	.258
43	Shoulder Circ	.374	.453	.258	.684	.591	.729	.700	.423	.484	.285
44	Shoulder Lgth	.263	.279	.066	.065	.244	.050	.045	.331	.345	.287
45	Sitting Height	.498	.551	.403	.339	.388	.319	.358	.673	.744	.507
46	Slv Lgth Spine-El	.656	.708	.365	.443	.499	.445	.456	.770	.775	.630
47	Slv Lgth Spine-Sc	.247	.294	.165	.396	.383	.499	.470	.321	.362	.182
48	Slv Lgth Spine-Wr	.772	.820	.385	.440	.481	.428	.445	.865	.839	.752
49	Sleeve Outseam	.800	.828	.378	.304	.370	.248	.275	.877	.810	.806
50	Span	.826	.859	.378	.324	.368	.286	.320	.916	.870	.843
51	Stature	.868	.901	.512	.367	.425	.330	.363	.941	.877	.867
52	Tenth Rib Hght	.898	.922	.483	.365	.373	.314	.333	.925	.827	.893
53	Thigh Circ	.301	.393	.264	.855	.596	.647	.604	.287	.348	.150
54	Thigh Clearance	.268	.349	.226	.747	.515	.664	.605	.270	.321	.126
55	Thumbtip Reach	.790	.821	.364	.360	.406	.318	.335	.838	.768	.779
56	Vert Trnk Circ USA	.491	.578	.411	.701	.658	.658	.634	.592	.666	.406
57	Waist Back Lgth, O	.425	.471	.327	.455	.552	.461	.457	.517	.573	.364
58	Waist Circ, NI	.253	.323	.208	.706	.639	.727	.676	.256	.311	.125
59	Waist Circ, O	.286	.356	.250	.745	.669	.680	.636	.285	.343	.143
60	Waist Front Lgth, O	.351	.409	.340	.487	.540	.429	.374	.445	.513	.289
61	Waist Hght, NI	.916	.938	.481	.395	.411	.348	.369	.923	.821	.895
62	Waist Hght Sit, NI	.352	.394	.268	.471	.382	.444	.439	.436	.515	.295
63	Waist Hght Sit, O	.277	.307	.237	.199	.112	.157	.149	.369	.419	.280
64	Waist Hip Lgth	.222	.249	.207	.022	.025	.015	.012	.334	.335	.263
65	Waist NI Waist O Lg	.114	.132	*.076	.385	.347	.368	.344	.061	*.091	.015
66	Weight	.494	.591	.366	.855	.706	.767	.725	.531	.576	.368
67	Wrist Cen Grip Lgth	.255	.297	.217	.293	.188	.256	.235	.250	.258	.227
68	Wrist Circ	.458	.551	.395	.644	.510	.625	.593	.511	.754	.532
69	Wrist Wall Lgth	.774	.802	.346	.354	.404	.318	.332	.815	.745	.760
70	Wrist Wall Lgth, Ex	.738	.782	.339	.365	.401	.303	.338	.805	.742	.745

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		41	42	43	44	45	46	47	48	49	50
1	Ab Ext Depth, S	.654	.373	.625	.001	.129	.346	.378	.314	.181	.173
2	Acromial Ht Sitting	.469	.274	.362	.022	.859	.491	.326	.518	.499	.494
3	Ankle Circ	.614	.377	.587	.096	.394	.448	.392	.446	.315	.368
4	Biceps C Flex	.787	.385	.782	.084	.190	.416	.467	.401	.201	.238
5	Bideloid Bdth S	.776	.452	.934	.326	.351	.664	.657	.613	.361	.442
6	Bustpt-Bustpt Bdth	.566	.336	.590	.887	.203	.422	.321	.411	.297	.312
7	Buttock Circ	.775	.486	.764	.138	.381	.550	.482	.537	.368	.394
8	Buttock Height	.382	.322	.358	.272	.495	.667	.217	.778	.813	.846
9	Buttock-Knee Lgth	.555	.416	.530	.276	.479	.729	.370	.796	.755	.773
10	Buttock-Pop Lgth	.454	.358	.432	.272	.446	.681	.304	.756	.742	.758
11	Calf Circumference	.663	.365	.688	.114	.288	.447	.443	.420	.256	.297
12	Calf Height	.325	.277	.311	.247	.424	.578	.196	.693	.728	.751
13	Chest Circ	.819	.424	.860	.110	.250	.565	.594	.520	.302	.329
14	Chest Circ at Scye	.826	.420	.908	.168	.289	.608	.635	.561	.326	.375
15	Chest Depth	.745	.423	.742	.079	.188	.449	.466	.417	.251	.243
16	Crotch Height	.296	.273	.269	.281	.494	.645	.205	.757	.809	.828
17	Crotch Length, O	.571	.351	.595	.115	.462	.454	.386	.461	.314	.379
18	Crotch Lgth Pos, O	.330	.217	.327	.088	.431	.296	.200	.329	.258	.311
19	Elbow Circ	.824	.450	.778	.119	.401	.568	.503	.574	.392	.440
20	Elbow Rest Height	.224	.015	.145	-.199	.568	-.038	.180	-.058	-.126	-.107
21	Eye Height, Sitting	.335	.349	.324	.235	.977	.518	.293	.543	.507	.548
22	Forearm Circ, Flex	.757	.357	.746	.110	.293	.488	.501	.486	.304	.346
23	Forearm-Forearm B	.755	.381	.800	.112	.211	.511	.569	.465	.223	.272
24	Forearm-Hand Lgth	.400	.325	.394	.285	.497	.644	.236	.814	.849	.920
25	Functional Leg Lgth	.496	.394	.466	.276	.520	.722	.308	.819	.814	.839
26	Gluteal Furrow Hght	.361	.293	.357	.281	.492	.676	.226	.787	.822	.848
27	Head Circ	.429	.274	.460	.098	.357	.358	.310	.361	.256	.320
28	Hip Breadth, Sitting	.702	.492	.677	.155	.400	.556	.440	.540	.399	.417
29	Interscye II	.437	.406	.693	.424	.278	.512	.602	.447	.213	.303
30	Knee Circ	.710	.427	.679	.100	.417	.512	.415	.521	.405	.418
31	Knee Height, Mid	.385	.318	.374	.263	.498	.656	.247	.772	.800	.826
32	Knee Height, Sitting	.470	.357	.453	.279	.551	.708	.294	.820	.828	.859
33	Lateral Malleolus H	.327	.193	.258	.066	.403	.365	.165	.385	.378	.378
34	Lower Thigh Circ	.706	.404	.684	.065	.339	.443	.396	.440	.304	.324
35	Neck Bustpt Lgth	.641	.499	.591	.244	.388	.499	.383	.481	.370	.368
36	Neck Circ	.719	.434	.729	.050	.319	.445	.499	.428	.248	.286
37	Neck Circ, Base	.672	.402	.700	.045	.358	.456	.470	.445	.275	.320
38	Ovrhd Fngtrp Rch E	.420	.365	.423	.331	.673	.770	.321	.865	.877	.916
39	Ovrhd Fngtrp Rch S	.451	.394	.484	.345	.744	.775	.362	.839	.810	.870
40	Popliteal Height	.287	.258	.284	.287	.507	.630	.182	.752	.806	.843

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		41	42	43	44	45	46	47	48	49	50
41	Scye Circ		.468	.796	.031	.348	.583	.499	.567	.412	.408
42	Scye Depth	.468		.467	.408	.366	.480	.278	.466	.366	.398
43	Shoulder Circ	.796	.467		.339	.338	.678	.633	.629	.379	.455
44	Shoulder Lgth	.031	.408	.339		.240	.419	.236	.404	.261	.402
45	Sitting Height	.348	.366	.338	.240		.524	.297	.549	.509	.554
46	Slv Lgth Spine-El	.583	.480	.678	.419	.524		.690	.952	.747	.785
47	Slv Lgth Spine-Sc	.499	.278	.633	.236	.297	.690		.586	.248	.294
48	Slv Lgth Spine-Wr	.567	.466	.629	.404	.549	.952	.586		.855	.894
49	Sleeve Outseam	.412	.366	.379	.261	.509	.747	.248	.855		.908
50	Span	.408	.398	.455	.402	.554	.785	.294	.894	.907	
51	Stature	.444	.391	.416	.298	.802	.714	.302	.802	.800	.844
52	Tenth Rib Hght	.433	.351	.424	.273	.638	.703	.284	.801	.807	.847
53	Thigh Circ	.738	.422	.750	.107	.264	.457	.448	.439	.265	.294
54	Thigh Clearance	.702	.362	.692	.065	.274	.397	.426	.387	.239	.255
55	Thumbtip Reach	.447	.402	.415	.298	.485	.717	.296	.826	.850	.866
56	Vert Trnk Circ USA	.738	.431	.674	.111	.678	.600	.482	.607	.477	.502
57	Waist Back Lgth, O	.487	.604	.430	.215	.641	.494	.268	.497	.454	.446
58	Waist Circ, NI	.772	.439	.763	.051	.207	.463	.489	.423	.244	.257
59	Waist Circ, O	.749	.470	.725	.056	.247	.462	.448	.429	.273	.272
60	Waist Front Lgth, O	.511	.357	.449	.132	.605	.428	.279	.413	.367	.366
61	Waist Hght, NI	.473	.380	.450	.274	.613	.713	.280	.813	.818	.851
62	Waist Hght Sit, NI	.443	.345	.438	.118	.649	.391	.263	.402	.333	.353
63	Waist Hght Sit, O	.162	.130	.171	*.092	.579	.251	.197	.287	.238	.275
64	Waist Hip Lgth	.022	.043	.069	.124	.419	.229	.182	.251	.203	.241
65	Waist NI Waist O Lg	.374	.230	.319	-.025	.046	.138	*.087	.125	.099	.063
66	Weight	.857	.521	.854	.168	.470	.656	.555	.651	.473	.512
67	Wrist Cen Grip Lgth	.254	.177	.218	.041	.200	.191	.114	.248	.223	.294
68	Wrist Circ	.680	.394	.604	.097	.488	.520	.430	.556	.457	.503
69	Wrist Wall Lgth	.451	.397	.418	.285	.463	.713	.300	.815	.837	.834
70	Wrist Wall Lgth, Ex	.438	.400	.426	.294	.459	.698	.253	.797	.830	.835

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		51	52	53	54	55	56	57	58	59	60
1	Ab Ext Depth, S	.193	.226	.718	.674	.234	.662	.512	.902	.912	.555
2	Acromial Ht, Sitting	.725	.627	.344	.354	.473	.785	.666	.358	.390	.619
3	Ankle Circ	.414	.405	.652	.586	.363	.618	.395	.533	.548	.416
4	Biceps C Flex	.244	.237	.762	.703	.262	.558	.313	.662	.635	.372
5	Bideloid Bdth S	.410	.403	.753	.687	.388	.686	.430	.760	.732	.449
6	Bustpt-Bustpt Bdth	.288	.304	.528	.463	.313	.546	.468	.654	.630	.457
7	Buttock Circ	.435	.431	.932	.805	.417	.795	.551	.832	.878	.560
8	Buttock Height	.885	.928	.260	.226	.800	.474	.426	.242	.259	.344
9	Buttock-Knee Lgth	.830	.851	.507	.467	.757	.618	.481	.456	.494	.433
10	Buttock-Pop Lgth	.815	.840	.399	.351	.745	.542	.446	.368	.408	.395
11	Calf Circumference	.295	.299	.787	.701	.294	.605	.365	.633	.640	.398
12	Calf Height	.768	.799	.262	.242	.730	.405	.363	.208	.236	.309
13	Chest Circ	.328	.349	.777	.697	.352	.726	.459	.885	.848	.480
14	Chest Circ at Scye	.364	.382	.767	.702	.375	.715	.429	.837	.790	.468
15	Chest Depth	.268	.301	.750	.679	.307	.668	.452	.839	.825	.481
16	Crotch Height	.873	.897	.171	.154	.777	.382	.346	.109	.137	.268
17	Crotch Length, O	.472	.488	.613	.561	.361	.744	.270	.573	.588	.292
18	Crotch Lgth Pos, O	.414	.407	.361	.322	.292	.479	.082	.251	.279	.115
19	Elbow Circ	.478	.454	.739	.700	.462	.716	.476	.697	.686	.523
20	Elbow Rest Height	.207	.099	.214	.246	-.087	.539	.390	.231	.245	.410
21	Eye Height, Sitting	.784	.628	.247	.256	.479	.665	.624	.195	.236	.599
22	Forearm Circ, Flex	.350	.338	.654	.643	.363	.585	.331	.610	.570	.397
23	Forearm-Forearm B	.273	.281	.721	.658	.297	.622	.377	.755	.724	.405
24	Forearm-Hand Lgth	.797	.808	.293	.266	.848	.489	.416	.241	.259	.316
25	Functional Leg Lgth	.888	.918	.409	.375	.804	.583	.476	.372	.404	.405
26	Gluteal Furrow Hght	.880	.918	.243	.210	.804	.440	.399	.216	.230	.326
27	Head Circ	.360	.327	.430	.387	.294	.474	.338	.462	.437	.298
28	Hip Breadth, Sitting	.466	.450	.873	.685	.433	.741	.579	.745	.818	.559
29	Interscye II	.282	.280	.460	.404	.315	.401	.288	.479	.440	.250
30	Knee Circ	.480	.475	.817	.724	.455	.736	.508	.694	.736	.529
31	Knee Height, Mid	.868	.898	.301	.268	.790	.491	.425	.253	.286	.351
32	Knee Height, Sitting	.901	.922	.393	.349	.821	.578	.471	.323	.356	.409
33	Lateral Malleolus H	.512	.483	.264	.226	.364	.411	.327	.208	.250	.340
34	Lower Thigh Circ	.367	.365	.855	.747	.360	.701	.455	.706	.745	.487
35	Neck Bustpt Lgth	.425	.373	.596	.515	.406	.658	.552	.639	.669	.540
36	Neck Circ	.330	.314	.647	.664	.318	.658	.461	.727	.680	.429
37	Neck Circ, Base	.363	.333	.604	.605	.335	.634	.457	.676	.636	.374
38	Ovrhd Fngtrp Rch E	.941	.925	.287	.270	.838	.592	.517	.256	.285	.445
39	Ovrhd Fngtrp Rch S	.877	.827	.348	.321	.768	.666	.573	.311	.343	.513
40	Popliteal Height	.867	.893	.150	.126	.779	.406	.364	.125	.143	.289

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		51	52	53	54	55	56	57	58	59	60
41	Scye Circ	.443	.433	.738	.702	.447	.738	.487	.772	.749	.511
42	Scye Depth	.391	.351	.422	.362	.402	.431	.604	.439	.470	.357
43	Shoulder Circ	.416	.424	.750	.692	.415	.674	.430	.763	.725	.449
44	Shoulder Lgth	.298	.273	.107	.065	.298	.111	.215	.051	.056	.132
45	Sitting Height	.802	.638	.264	.274	.485	.678	.641	.207	.247	.605
46	Slv Lgth Spine-El	.714	.703	.457	.397	.717	.600	.494	.463	.462	.428
47	Slv Lgth Spine-Sc	.302	.284	.448	.426	.296	.482	.268	.489	.448	.279
48	Slv Lgth Spine-Wr	.802	.801	.439	.387	.826	.607	.497	.423	.429	.413
49	Sleeve Outseam	.800	.807	.265	.239	.850	.477	.454	.244	.273	.367
50	Span	.844	.847	.294	.255	.866	.502	.446	.257	.272	.366
51	Stature		.940	.314	.296	.785	.670	.594	.275	.311	.543
52	Tenth Rib Hght	.940		.325	.296	.799	.612	.494	.301	.323	.442
53	Thigh Circ	.314	.325		.849	.314	.696	.447	.777	.821	.471
54	Thigh Clearance	.296	.296	.849		.278	.660	.413	.716	.725	.450
55	Thumbtip Reach	.784	.799	.314	.278		.513	.477	.304	.327	.383
56	Vert Trnk Circ USA	.670	.612	.696	.660	.513		.722	.724	.751	.715
57	Waist Back Lgth, O	.594	.494	.447	.413	.477	.722		.531	.577	.761
58	Waist Circ, NI	.275	.301	.777	.715	.304	.724	.531		.956	.546
59	Waist Circ, O	.311	.323	.821	.725	.327	.751	.577	.956		.588
60	Waist Front Lgth, O	.543	.442	.471	.450	.383	.715	.761	.546	.588	
61	Waist Hght, NI	.935	.964	.380	.343	.806	.623	.523	.356	.286	.453
62	Waist Hght Sit, NI	.523	.496	.462	.453	.328	.654	.554	.448	.478	.508
63	Waist Hght Sit, O	.451	.386	.156	.210	.245	.390	.096	-.035	.008	.051
64	Waist Hip Lgth	.348	.306	-.023	.022	.179	.194	-.132	-.149	-.130	-.105
65	Waist NI Waist O Lg	*.090	.106	.456	.395	.117	.368	.553	.564	.585	.528
66	Weight	.562	.555	.891	.815	.522	.863	.615	.868	.879	.615
67	Wrist Cen Grip Lgth	.274	.280	.211	.185	.300	.270	.219	.195	.196	.177
68	Wrist Circ	.536	.506	.533	.544	.508	.660	.475	.550	.536	.487
69	Wrist Wall Lgth	.763	.784	.323	.287	.983	.506	.464	.313	.334	.373
70	Wrist Wall Lgth, Ex	.745	.770	.327	.275	.895	.504	.461	.325	.346	.360

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		61	62	63	64	65	66	67	68	69	70
1	Ab Ext Depth, S	.274	.382	-.110	-.217	.590	.773	.154	.463	.240	.232
2	Acromial Ht, Sitting	.604	.688	.528	.334	.160	.552	.232	.527	.455	.446
3	Ankle Circ	.417	.435	.283	.149	.232	.727	.290	.690	.346	.356
4	Biceps C Flex	.273	.296	.103	-.006	.296	.781	.241	.575	.266	.243
5	Bideltoid Bdth S	.431	.435	.201	.071	.309	.847	.240	.599	.385	.388
6	Bustpt-Bustpt Bdth	.315	.299	-.028	-.135	.384	.636	.135	.415	.313	.337
7	Buttock Circ	.485	.533	.214	.033	.463	.936	.231	.607	.421	.427
8	Buttock Height	.926	.355	.263	*.091	.112	.474	.267	.422	.782	.763
9	Buttock-Knee Lgth	.883	.376	.281	.214	.189	.676	.226	.510	.752	.726
10	Buttock-Pop Lgth	.867	.317	.246	.182	.164	.569	.194	.406	.731	.708
11	Calf Circumference	.314	.372	.175	.051	.298	.794	.227	.601	.286	.288
12	Calf Height	.825	.300	.230	.211	.102	.422	.229	.405	.715	.661
13	Chest Circ	.375	.396	*.092	-.026	.390	.879	.163	.570	.367	.380
14	Chest Circ at Scye	.401	.408	.137	.028	.342	.874	.183	.600	.387	.397
15	Chest Depth	.333	.381	.051	*.081	.448	.823	.145	.519	.327	.343
16	Crotch Height	.905	.280	.296	.288	-.008	.374	.214	.362	.762	.725
17	Crotch Length, O	.472	.529	.555	.447	.007	.695	.213	.506	.359	.380
18	Crotch Lgth Pos, O	.377	.359	.574	.536	-.234	.415	.176	.322	.282	.300
19	Elbow Circ	.488	.453	.210	.060	.344	.861	.335	.780	.450	.434
20	Elbow Rest Height	.062	.530	.418	.215	.109	.284	.117	.254	-.097	-.100
21	Eye Height, Sitting	.599	.631	.567	.415	.035	.450	.198	.475	.456	.449
22	Forearm Circ, Flex	.368	.356	.174	.071	.245	.758	.288	.704	.357	.328
23	Forearm-Forearm B	.317	.361	.118	.004	.345	.785	.200	.537	.310	.306
24	Forearm-Hand Lgth	.820	.335	.273	.220	.081	.496	.370	.545	.804	.797
25	Functional Leg Lgth	.935	.380	.289	.222	.150	.607	.257	.505	.792	.773
26	Gluteal Furrow Hght	.926	.320	.252	.210	.076	.450	.242	.406	.792	.758
27	Head Circ	.345	.368	.164	.054	.228	.536	.231	.476	.274	.319
28	Hip Breadth, Sitting	.503	.508	.180	.007	.455	.874	.229	.558	.436	.448
29	Interscye II	.284	.290	.167	.140	.126	.550	.148	.399	.316	.299
30	Knee Circ	.505	.511	.238	.056	.380	.863	.310	.690	.447	.447
31	Knee Height, Mid	.916	.352	.277	.222	.114	.494	.255	.458	.774	.738
32	Knee Height, Sitting	.938	.394	.307	.249	.132	.591	.297	.551	.802	.782
33	Lateral Malleolus H	.481	.268	.237	.207	.076	.366	.217	.395	.346	.339
34	Lower Thigh Circ	.395	.471	.199	.022	.385	.855	.293	.644	.354	.365
35	Neck Bustpt Lgth	.411	.382	.112	.025	.347	.706	.188	.510	.404	.401
36	Neck Circ	.348	.444	.157	.015	.368	.767	.256	.625	.318	.303
37	Neck Circ, Base	.369	.439	.149	.012	.344	.725	.235	.593	.332	.338
38	Ovrhd Engtrp Rch E	.923	.436	.369	.334	.061	.531	.250	.511	.815	.805
39	Ovrhd Engtrp Rch S	.821	.515	.419	.335	.091	.576	.258	.532	.687	.619
40	Popliteal Height	.895	.295	.280	.263	.015	.368	.227	.398	.669	.572

\* Correlation not significant at  $p \leq .05$

## Male Correlation Coefficients

		61	62	63	64	65	66	67	68	69	70
41	Scye Circ	.473	.443	.162	.022	.374	.857	.254	.680	.451	.438
42	Scye Depth	.380	.345	.130	.043	.230	.521	.177	.394	.397	.400
43	Shoulder Circ	.450	.438	.171	.069	.319	.854	.218	.604	.418	.426
44	Shoulder Lgth	.274	.118	.092	.124	-.025	.168	.041	.097	.285	.294
45	Sitting Height	.613	.649	.579	.419	.046	.470	.200	.488	.463	.459
46	Slv Lgth Spine-El	.713	.391	.251	.229	.138	.655	.191	.520	.713	.698
47	Slv Lgth Spine-Sc	.280	.263	.197	.182	*.087	.555	.114	.430	.300	.253
48	Slv Lgth Spine-Wr	.813	.402	.287	.251	.125	.651	.248	.556	.815	.797
49	Sleeve Outseam	.818	.333	.238	.203	.099	.473	.223	.457	.837	.830
50	Span	.851	.353	.275	.241	.063	.512	.294	.503	.834	.835
51	Stature	.935	.523	.451	.348	*.090	.562	.274	.536	.763	.745
52	Tenth Rib Hght	.964	.496	.386	.306	.106	.555	.280	.506	.784	.770
53	Thigh Circ	.380	.462	.156	-.023	.456	.891	.211	.533	.323	.327
54	Thigh Clearance	.343	.453	.210	.022	.395	.815	.185	.544	.287	.275
55	Thumbtip Reach	.806	.328	.245	.179	.117	.522	.300	.508	.983	.895
56	Vert Trnk Circ USA	.623	.654	.390	.194	.368	.863	.270	.660	.506	.504
57	Waist Back Lgth, O	.523	.554	.096	-.132	.553	.615	.219	.475	.464	.461
58	Waist Circ, NI	.356	.448	-.035	-.149	.564	.868	.195	.550	.313	.325
59	Waist Circ, O	.386	.478	.008	-.130	.585	.879	.196	.536	.334	.346
60	Waist Front Lgth, O	.453	.508	.051	-.105	.528	.615	.177	.489	.373	.360
61	Waist Hght, NI		.569	.353	.255	.239	.594	.297	.511	.791	.778
62	Waist Hght Sit, NI	.569		.463	.181	.504	.566	.267	.442	.322	.341
63	Waist Hght Sit, O	.353	.463		.617	-.324	.231	.185	.281	.234	.210
64	Waist Hip Lgth	.255	.181	.617		-.556	.060	.032	.162	.175	.163
65	Waist NI Waist O Lg	.239	.504	-.324	-.556		.452	.155	.234	.124	.135
66	Weight	.594	.566	.231	.060	.452		.294	.721	.521	.519
67	Wrist Cen Grip Lgth	.297	.267	.185	.032	.155	.294		.349	.236	.209
68	Wrist Circ	.511	.442	.281	.162	.234	.721	.349		.483	.477
69	Wrist Wall Lgth	.791	.322	.234	.175	.124	.521	.236	.483		.898
70	Wrist Wall Lgth, Ex	.778	.341	.210	.163	.135	.519	.209	.477	.898	

\* Correlation not significant at  $p \leq .05$



## Female Correlation Coefficients

		1	2	3	4	5	6	7	8	9	10
1	Ab Ext Depth, S		*.096	.363	.678	.611	.433	.705	.228	.430	.326
2	Acromial Ht, Sitting	*.096		.324	.136	.327	.184	.350	.494	.452	.409
3	Ankle Circ	.363	.324		.513	.442	.253	.566	.290	.375	.253
4	Biceps C Flex	.678	.136	.513		.698	.354	.724	.198	.394	.260
5	Bideloid Bdth S	.611	.327	.442	.698		.434	.696	.405	.541	.438
6	Bustpt-Bustpt Bdth	.433	.184	.253	.354	.434		.383	.258	.311	.243
7	Buttock Circ	.705	.350	.566	.724	.696	.383		.356	.625	.504
8	Buttock Height	.228	.494	.290	1.980	.405	.258	.376		.853	.854
9	Buttock-Knee Lgth	.430	.452	.375	.394	.541	.311	.625	.853		.963
10	Buttock-Pop Lgth	.326	.409	.253	.260	.438	.243	.504	.854	.963	
11	Calf Circumference	.480	.247	.772	.650	.546	.284	.672	.274	.420	.264
12	Calf Height	.208	.373	.173	.187	.341	.225	.359	.843	.757	.737
13	Chest Circ	.739	.263	.474	.705	.778	.599	.686	.337	.466	.353
14	Chest Circ at Scye	.689	.310	.443	.741	.854	.484	.696	.378	.498	.385
15	Chest Depth	.746	.150	.363	.684	.635	.540	.636	.229	.395	.290
16	Crotch Height	*.088	.494	.240	.077	.311	.197	.282	.945	.824	.841
17	Crotch Length, O	.368	.525	.432	.449	.510	.199	.661	.377	.543	.475
18	Crotch Lgth Pos, O	.144	.404	.265	.224	.283	*.101	.449	.255	.416	.397
19	Elbow Circ	.636	.345	.619	.838	.710	.397	.730	.396	.536	.402
20	Elbow Rest Height	.013	.737	.182	.074	*.101	.054	.161	-.071	-.076	-.130
21	Eye Height, Sitting	.018	.861	.337	.077	.307	.141	.318	.496	.462	.435
22	Forearm Circ, Flex	.559	.255	.578	.829	.667	.358	.646	.312	.434	.303
23	Forearm-Forearm B	.638	.297	.474	.690	.803	.404	.669	.327	.449	.347
24	Forearm-Hand Lgth	.186	.448	.282	.209	.406	.239	.362	.849	.772	.764
25	Functional Leg Lgth	.344	.510	.379	.305	.473	.277	.528	.932	.923	.901
26	Gluteal Furrow Hght	.140	.487	.237	.127	.344	.235	.293	.957	.816	.825
27	Head Circ	.244	.335	.330	.308	.404	.254	.345	.417	.417	.371
28	Hip Breadth, Sitting	.624	.330	.545	.624	.570	.309	.920	.354	.570	.466
29	Interscye II	.385	.309	.357	.417	.674	.291	.458	.391	.445	.372
30	Knee Circ	.611	.341	.699	.690	.589	.341	.809	.419	.592	.444
31	Knee Height, Mid	.170	.469	.281	.139	.345	.223	.334	.925	.813	.816
32	Knee Height, Sitting	.223	.499	.366	.214	.407	.261	.421	.935	.853	.838
33	Lateral Malleolus H	.056	.353	.243	.061	.132	.139	.179	.444	.349	.327
34	Lower Thigh Circ	.609	.289	.699	.722	.586	.312	.817	.327	.518	.364
35	Neck Bustpt Lgth	.494	.260	.334	.461	.524	.477	.504	.228	.357	.275
36	Neck Circ	.561	.314	.487	.635	.643	.426	.581	.334	.397	.282
37	Neck Circ, Base	.487	.347	.470	.537	.622	.385	.552	.388	.434	.338
38	Ovrhd Fngrtp Rch E	.115	.633	.292	.110	.392	.205	.339	.898	.822	.820
39	Ovrhd Fngrtp Rch S	.129	.709	.306	.150	.458	.215	.382	.779	.729	.715
40	Popliteal Height	-.015	.441	.149	-.050	.217	.148	.138	.883	.699	.754

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		1	2	3	4	5	6	7	8	9	10
41	Scye Circ	.624	.397	.480	.757	.722	.446	.688	.368	.486	.375
42	Scye Depth	.374	.235	.373	.367	.372	.213	.462	.334	.400	.334
43	Shoulder Circ	.661	.306	.465	.737	.924	.465	.718	.452	.571	.460
44	Shoulder Lgth	.062	*.099	.153	.049	.332	.128	.141	.263	.288	.271
45	Sitting Height	.044	.874	.352	*.096	.329	.163	.335	.518	.480	.449
46	Slv Lgth Spine-El	.254	.499	.380	.282	.588	.304	.440	.713	.722	.685
47	Slv Lgth Spine-Sc	.282	.341	.318	.330	.606	.328	.376	.336	.415	.352
48	Slv Lgth Spine-Wr	.250	.500	.359	.282	.560	.305	.448	.829	.802	.774
49	Sleeve Outseam	.134	.497	.240	.130	.363	.211	.328	.847	.770	.774
50	Span	.125	.496	.264	.131	.430	.219	.322	.872	.784	.784
51	Stature	.127	.734	.344	.136	.390	.232	.382	.881	.803	.796
52	Tenth Rib Hght	.143	.633	.298	.137	.365	.206	.353	.925	.827	.822
53	Thigh Circ	.682	.270	.560	.765	.671	.349	.928	.321	.559	.424
54	Thigh Clearance	.598	.218	.452	.687	.622	.348	.760	.288	.478	.358
55	Thumbtip Reach	.233	.464	.295	.192	.402	.242	.383	.822	.773	.761
56	Vert Trnk Circ USA	.519	.743	.526	.511	.624	.371	.706	.520	.632	.540
57	Waist Back Lgth, O	.373	.568	.334	.249	.337	.234	.421	.450	.444	.390
58	Waist Circ, NI	.849	.177	.431	.732	.719	.497	.722	.324	.476	.363
59	Waist Circ, O	.891	.144	.411	.688	.647	.457	.747	.294	.449	.343
60	Waist Front Lgth, O	.425	.567	.311	.294	.428	.311	.407	.352	.382	.317
61	Waist Hght, NI	.218	.611	.308	.208	.417	.237	.415	.905	.836	.821
62	Waist Hght Sit, NI	.240	.562	.259	.277	.335	.148	.388	.312	.325	.260
63	Waist Hght Sit, O	.160	.580	.376	.319	.417	.142	.509	.340	.421	.367
64	Waist Hip Lgth	-.359	.387	.051	-.191	-.055	-.108	-.006	.061	.144	.165
65	Waist NI Waist O Lg	.442	.103	.120	.310	.259	.197	.294	.096	.157	.092
66	Weight	.759	.448	.642	.796	.806	.478	.899	.541	.721	.587
67	Wrist Cen Grip Lgth	.199	.246	.249	.244	.282	.118	.263	.358	.315	.272
68	Wrist Circ	.391	.419	.618	.553	.562	.337	.513	.431	.485	.393
69	Wrist Wall Lgth	.223	.445	.274	.180	.385	.237	.365	.803	.748	.740
70	Wrist Wall Lgth, Ex	.202	.448	.300	.181	.375	.211	.350	.806	.710	.705

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		11	12	13	14	15	16	17	18	19	20
1	Ab Ext Depth, S	.480	.208	.739	.689	.746	*.088	.368	.144	.636	.013
2	Acromial Ht, Sitting	.247	.373	.263	.310	.150	.494	.525	.404	.345	.737
3	Ankle Circ	.772	.173	.438	.443	.363	.240	.432	.265	.619	.182
4	Biceps C Flex	.650	.187	.705	.741	.684	.077	.449	.224	.838	.074
5	Bideltoid Bdth S	.546	.341	.778	.854	.635	.311	.510	.283	.710	.101
6	Bustpt-Bustpt Bdth	.284	.225	.599	.484	.540	.197	.199	.101*	.397	.054
7	Buttock Circ	.672	.359	.686	.696	.636	.282	.661	.449	.730	.161
8	Buttock Height	.274	.843	.337	.378	.229	.945	.377	.255	.396	-.071
9	Buttock-Knee Lgth	.420	.757	.466	.498	.395	.824	.544	.416	.536	-.077
10	Buttock-Pop Lgth	.264	.737	.353	.385	.289	.841	.475	.397	.402	-.130
11	Calf Circumference		.216	.525	.549	.470	.207	.474	.281	.680	.103*
12	Calf Height	.216		.268	.301	.191	.832	.311	.221	.362	-.128
13	Chest Circ	.525	.268		.912	.898	.198	.443	.176	.714	.115
14	Chest Circ at Scye	.549	.301	.912		.791	.254	.493	.235	.747	.134
15	Chest Depth	.470	.191	.898	.791		*.097	.389	.158	.650	.066
16	Crotch Height	.207	.832	.198	.254	*.097		.302	.251	.296	-.092
17	Crotch Length, O	.474	.311	.443	.493	.389	.302		.774	.533	.322
18	Crotch Lgth Pos, O	.281	.221	.176	.235	.158	.251	.774		.315	.220
19	Elbow Circ	.680	.362	.714	.747	.650	.296	.533	.315		.123
20	Elbow Rest Height	.103	-.128	.115	.134	.066	*-.092	.322	.220	.123	
21	Eye Height, Sitting	.231	.369	.160	.234	.058	.522	.524	.456	.297	.560
22	Forearm Circ, Flex	.661	.280	.669	.708	.614	.212	.474	.259	.919	.090*
23	Forearm-Forearm B	.548	.274	.776	.803	.669	.218	.452	.206	.708	.148
24	Forearm-Hand Lgth	.268	.783	.302	.350	.215	.853	.354	.272	.433	-.118
25	Functional Leg Lgth	.375	.808	.416	.448	.317	.907	.488	.354	.482	-.048
26	Gluteal Furrow Hght	.214	.825	.271	.315	.165	.962	.320	.227	.328	-.083
27	Head Circ	.316	.357	.361	.381	.319	.379	.329	.181	.403	.103*
28	Hip Breadth, Sitting	.666	.332	.572	.564	.532	.263	.593	.405	.630	.161
29	Interscye II	.379	.325	.551	.637	.432	.344	.385	.239	.496	.061
30	Knee Circ	.771	.443	.597	.611	.567	.342	.549	.354	.767	.106*
31	Knee Height, Mid	.259	.840	.267	.308	.175	.937	.350	.286	.343	-.103
32	Knee Height, Sitting	.346	.860	.323	.369	.227	.943	.401	.306	.428	-.079
33	Lateral Malleolus H	.195	.376	.144	.158	*.091	.418	.230	.217	.227	.095*
34	Lower Thigh Circ	.795	.351	.592	.600	.566	.240	.540	.335	.757	.128
35	Neck Bustpt Lgth	.396	.158	.665	.562	.616	.137	.347	.204	.465	.150
36	Neck Circ	.481	.259	.690	.698	.604	.227	.441	.198	.697	.147
37	Neck Circ, Base	.450	.288	.632	.650	.538	.302	.431	.207	.640	.130
38	Ovrhd Fngtrp Rch E	.266	.769	.260	.328	.147	.928	.438	.359	.357	.036
39	Ovrhd Fngtrp Rch S	.288	.650	.299	.378	.187	.798	.496	.403	.385	.176
40	Popliteal Height	.091	.785	.117	.172	.011	.926	.239	.218	.182	-.126

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		11	12	13	14	15	16	17	18	19	20
41	Scye Circ	.548	.276	.801	.822	.713	.241	.501	.244	.795	.202
42	Scye Depth	.334	.265	.406	.382	.374	.274	.342	.206	.430	.025
43	Shoulder Circ	.580	.368	.824	.905	.703	.345	.505	.275	.762	.058
44	Shoulder Lgth	.135	.209	.110	.170	.053	.285	.150	.162	.111	-.095
45	Sitting Height	.247	.383	.190	.261	.081	.536	.535	.451	.318	.570
46	Slv Lgth Spine-El	.382	.596	.428	.497	.310	.717	.430	.323	.484	-.070
47	Slv Lgth Spine-Sc	.345	.262	.461	.535	.360	.327	.305	.188	.410	.110
48	Slv Lgth Spine-Wr	.364	.723	.419	.481	.303	.826	.429	.311	.498	-.111
49	Sleeve Outseam	.228	.757	.261	.304	.169	.866	.364	.293	.366	-.152
50	Span	.253	.770	.279	.341	.157	.890	.366	.293	.375	-.133
51	Stature	.279	.737	.272	.332	.150	.896	.498	.402	.384	.198
52	Tenth Rib Hght	.265	.796	.267	.329	.168	.934	.469	.362	.368	.076
53	Thigh Circ	.726	.310	.667	.683	.627	.210	.600	.355	.731	.137
54	Thigh Clearance	.590	.270	.613	.649	.584	.189	.484	.248	.640	.079
55	Thumbtip Reach	.281	.736	.339	.378	.237	.825	.378	.296	.415	-.134
56	Vert Trnk Circ USA	.523	.423	.635	.646	.544	.445	.702	.472	.665	.479
57	Waist Back Lgth, O	.268	.369	.357	.343	.297	.395	.194	.046	.394	.349
58	Waist Circ, NI	.529	.281	.863	.817	.805	.184	.404	.147	.715	.037
59	Waist Circ, O	.490	.258	.785	.729	.749	.139	.290	.032	.654	.049
60	Waist Front Lgth, O	.299	.270	.468	.471	.399	.291	.240	.080	.418	.069
61	Waist Hght, NI	.297	.792	.314	.371	.223	.904	.464	.354	.418	.069
62	Waist Hght Sit, NI	.265	.262	.242	.303	.234	.269	.437	.322	.360	.425
63	Waist Hght Sit, O	.348	.251	.285	.388	.238	.317	.734	.573	.401	.407
64	Waist Hip Lgth	-.008	.088	-.217	-.144	-.242	.242	.456	.538	-.077	.225
65	Waist NI Waist O Lg	.186	.110	.310	.290	.343	.021	-.056	-.154	.288	*.101
66	Weight	.748	.471	.824	.836	.752	.431	.647	.375	.848	.168
67	Wrist Cen Grip Lgth	.231	.317	.235	.259	.157	.303	.246	.134	.313	.064
68	Wrist Circ	.520	.378	.533	.564	.456	.373	.478	.325	.768	.140
69	Wrist Wall Lgth	.259	.708	.331	.373	.229	.803	.363	.276	.393	-.146
70	Wrist Wall Lgth, Ex	.270	.689	.331	.369	.231	.787	.371	.254	.390	-.120

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		21	22	23	24	25	26	27	28	29	30
1	Ab Ext Depth, S	.018	.559	.638	.186	.344	.140	.244	.624	.385	.611
2	Acromial Ht, Sitting	.861	.255	.297	.448	.510	.487	.335	.330	.309	.341
3	Ankle Circ	.337	.578	.474	.282	.379	.237	.330	.545	.357	.699
4	Biceps C Flex	.077	.829	.690	.209	.305	.127	.308	.624	.417	.690
5	Bideltoid Bdth S	.307	.667	.803	.406	.473	.344	.404	.570	.674	.589
6	Bustpt-Bustpt Bdth	.141	.358	.404	.239	.277	.235	.254	.309	.291	.341
7	Buttock Circ	.318	.646	.669	.362	.528	.293	.345	.920	.458	.809
8	Buttock Height	.496	.312	.327	.849	.932	.957	.417	.354	.391	.419
9	Buttock-Knee Lgth	.462	.434	.449	.772	.923	.816	.417	.570	.445	.592
10	Buttock-Pop Lgth	.435	.303	.347	.764	.901	.825	.316	.446	.372	.444
11	Calf Circumference	.231	.661	.548	.268	.375	.214	.316	.666	.379	.771
12	Calf Height	.369	.280	.274	.783	.808	.825	.357	.332	.325	.443
13	Chest Circ	.160	.669	.776	.302	.416	.271	.361	.572	.551	.597
14	Chest Circ at Scye	.134	.708	.803	.350	.448	.315	.381	.564	.637	.611
15	Chest Depth	.066	.614	.669	.215	.317	.165	.319	.532	.432	.567
16	Crotch Height	-.092	.212	.218	.853	.907	.962	.379	.263	.344	.342
17	Crotch Length, O	.524	.474	.452	.354	.488	.320	.329	.593	.385	.549
18	Crotch Lgth Pos, O	.456	.259	.206	.272	.354	.227	.181	.405	.239	.354
19	Elbow Circ	.297	.919	.708	.433	.482	.328	.403	.630	.496	.767
20	Elbow Rest Height	.560	*.090	.148	-.118	-.048	-.083	*.103	.161	.061	*.106
21	Eye Height, Sitting		.199	.203	.462	.523	.501	.298	.313	.352	.302
22	Forearm Circ, Flex	.199		.681	.350	.378	.248	.394	.545	.460	.693
23	Forearm-Forearm B	.203	.681		.303	.400	.260	.356	.558	.526	.587
24	Forearm-Hand Lgth	.462	.350	.303		.830	.847	.426	.303	.401	.430
25	Functional Leg Lgth	.523	.378	.400	.830		.908	.437	.489	.427	.525
26	Gluteal Furrow Hght	.501	.248	.260	.847	.908		.400	.257	.366	.344
27	Head Circ	.298	.394	.356	.426	.437	.400		.282	.336	.380
28	Hip Breadth, Sitting	.313	.545	.558	.303	.489	.257	.282		.398	.781
29	Interscye II	.352	.460	.526	.401	.427	.366	.336	.398		.423
30	Knee Circ	.302	.693	.589	.430	.525	.344	.380	.781	.423	
31	Knee Height, Mid	.495	.262	.276	.855	.904	.930	.387	.300	.392	.392
32	Knee Height, Sitting	.521	.334	.331	.886	.929	.932	.439	.387	.420	.502
33	Lateral Malleolus H	.362	.161	.129	.329	.402	.416	.189	.175	.207	.254
34	Lower Thigh Circ	.240	.694	.591	.338	.441	.246	.352	.797	.390	.967
35	Neck Bustpt Lgth	.236	.404	.513	.191	.330	.181	.271	.445	.397	.428
36	Neck Circ	.235	.698	.661	.339	.378	.286	.461	.437	.493	.555
37	Neck Circ, Base	.298	.629	.606	.408	.426	.348	.453	.414	.482	.528
38	Ovrhd Fngtrp Rch E	.679	.262	.286	.867	.897	.910	.422	.368	.455	.382
39	Ovrhd Fngtrp Rch S	.751	.297	.322	.791	.788	.782	.437	.342	.455	.393
40	Popliteal Height	.491	*.103	.132	.828	.824	.915	.340	.110	.312	.171

\* Correlation not significant at  $p \leq .05$

## NAWCADPAX--96-221-TM

## Female Correlation Coefficients

		21	22	23	24	25	26	27	28	29	30
41	Scye Circ	.359	.754	.735	.345	.441	.292	.388	.566	.490	.624
42	Scye Depth	.345	.363	.374	.298	.421	.306	.241	.445	.395	.406
43	Shoulder Circ	.295	.717	.771	.437	.518	.388	.412	.589	.698	.623
44	Shoulder Lgth	.342	.073	*.099	.279	.303	.284	.125	.131	.441	.113
45	Sitting Height	.977	.224	.233	.474	.545	.519	.356	.330	.371	.315
46	Slv Lgth Spine-El	.581	.397	.453	.689	.740	.705	.418	.405	.571	.467
47	Slv Lgth Spine-Sc	.383	.388	.481	.323	.363	.335	.327	.325	.607	.344
48	Slv Lgth Spine-Wr	.558	.411	.429	.855	.841	.820	.444	.406	.539	.483
49	Sleeve Outseam	.509	.275	.272	.885	.833	.851	.398	.293	.383	.389
50	Span	.551	.292	.303	.934	.854	.878	.423	.281	.429	.380
51	Stature	.803	.278	.289	.798	.883	.884	.438	.365	.414	.403
52	Tenth Rib Hght	.649	.279	.276	.828	.911	.925	.420	.337	.398	.404
53	Thigh Circ	.215	.673	.641	.290	.450	.240	.343	.878	.422	.825
54	Thigh Clearance	.170	.597	.588	.291	.389	.210	.323	.641	.391	.685
55	Thumbtip Reach	.492	.323	.323	.871	.828	.817	.424	.343	.462	.435
56	Vert Trnk Circ USA	.695	.567	.598	.472	.628	.459	.427	.643	.467	.628
57	Waist Back Lgth, O	.577	.302	.336	.399	.497	.420	.305	.416	.360	.386
58	Waist Circ, NI	.074	.668	.754	.299	.412	.253	.329	.605	.479	.630
59	Waist Circ, O	.047	.579	.694	.221	.396	.205	.276	.661	.415	.618
60	Waist Front Lgth, O	.588	.315	.381	.288	.419	.318	.286	.396	.313	.366
61	Waist Hght, NI	.630	.320	.335	.814	.897	.904	.410	.389	.420	.444
62	Waist Hght Sit, NI	.548	.295	.302	.273	.320	.285	.215	.358	.310	.362
63	Waist Hght Sit, O	.593	.356	.350	.311	.387	.305	.278	.434	.310	.426
64	Waist Hip Lgth	.477	*.103	-.122	.180	.163	.177	.054	-.016	.037	-.017
65	Waist NI Waist O Lg	.054	.237	.288	.064	.125	.065	*.091	.275	.177	.262
66	Weight	.396	.775	.777	.509	.657	.464	.476	.813	.574	.846
67	Wrist Cen Grip Lgth	.241	.283	.278	.395	.346	.328	.171	.235	.209	.252
68	Wrist Circ	.417	.722	.517	.524	.476	.398	.423	.421	.436	.599
69	Wrist Wall Lgth	.475	.303	.315	.830	.809	.797	.406	.327	.455	.413
70	Wrist Wall Lgth, Ex	.479	.312	.315	.799	.798	.790	.391	.315	.435	.405

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		31	32	33	34	35	36	37	38	39	40
1	Ab Ext Depth, S	.170	.223	.056	.609	.494	.561	.487	.115	.129	-.015
2	Acromial Ht, Sitting	.469	.499	.353	.289	.260	.314	.347	.633	.709	.441
3	Ankle Circ	.281	.366	.243	.699	.334	.469	.470	.292	.306	.149
4	Biceps C Flex	.139	.214	.061	.722	.461	.635	.537	.110	.150	-.050
5	Bideltoid Bdth S	.345	.407	.132	.586	.524	.643	.622	.392	.458	.217
6	Bustpt-Bustpt Bdth	.223	.261	.139	.312	.477	.426	.385	.205	.215	.148
7	Buttock Circ	.334	.421	.179	.817	.504	.581	.552	.339	.382	.138
8	Buttock Height	.925	.935	.444	.327	.227	.334	.388	.898	.779	.883
9	Buttock-Knee Lgth	.813	.853	.349	.518	.357	.397	.434	.822	.729	.699
10	Buttock-Pop Lgth	.816	.838	.327	.364	.275	.282	.338	.820	.715	.754
11	Calf Circumference	.259	.346	.195	.795	.396	.481	.450	.266	.288	*.091
12	Calf Height	.840	.860	.376	.351	.158	.259	.288	.769	.650	.785
13	Chest Circ	.267	.323	.144	.592	.665	.690	.632	.260	.299	.117
14	Chest Circ at Scye	.308	.369	.158	.600	.562	.698	.650	.328	.378	.172
15	Chest Depth	.175	.227	.091	.566	.616	.604	.538	.147	.187	.011
16	Crotch Height	.937	.943	.418	.240	.137	.228	.302	.928	.798	.926
17	Crotch Length, O	.350	.401	.230	.540	.347	.441	.431	.438	.496	.239
18	Crotch Lgth Pos, O	.286	.306	.217	.335	.204	.198	.207	.359	.403	.218
19	Elbow Circ	.343	.428	.227	.757	.465	.697	.640	.357	.385	.182
20	Elbow Rest Height	*.103	-.079	.095	.128	.150	.147	.130	.036	.176	-.126
21	Eye Height, Sitting	.495	.521	.362	.240	.237	.235	.298	.679	.751	.491
22	Forearm Circ, Flex	.262	.334	.161	.694	.404	.698	.629	.262	.297	.103
23	Forearm-Forearm B	.276	.331	.129	.591	.513	.661	.606	.286	.322	.132
24	Forearm-Hand Lgth	.855	.886	.329	.338	.191	.339	.408	.867	.791	.828
25	Functional Leg Lgth	.904	.929	.402	.441	.33	.378	.426	.897	.788	.824
26	Gluteal Furrow Hght	.930	.932	.416	.246	.181	.286	.348	.910	.782	.915
27	Head Circ	.387	.439	.189	.352	.271	.461	.453	.422	.437	.340
28	Hip Breadth, Sitting	.300	.387	.175	.797	.445	.437	.414	.312	.342	.110
29	Interscye II	.392	.420	.207	.390	.397	.493	.482	.410	.455	.312
30	Knee Circ	.392	.502	.254	.967	.428	.555	.528	.382	.393	.171
31	Knee Height, Mid		.967	.446	.282	.198	.281	.331	.907	.777	.921
32	Knee Height, Sitting	.967		.441	.408	.223	.339	.394	.920	.803	.913
33	Lateral Malleolus H	.446	.441		.201	.109	.141	.165	.399	.369	.417
34	Lower Thigh Circ	.282	.408	.201		.425	.546	.504	.279	.305	.062
35	Neck Bustpt Lgth	.198	.223	.109	.425		.467	.411	.219	.272	.072
36	Neck Circ	.281	.339	.141	.546	.467		.881	.284	.320	.164
37	Neck Circ, Base	.331	.394	.165	.504	.411	.881		.364	.393	.246
38	Ovrhd Fngtrp Rch E	.907	.920	.399	.279	.219	.284	.364		.919	.885
39	Ovrhd Fngtrp Rch S	.776	.803	.369	.305	.272	.320	.393	.919		.761
40	Popliteal Height	.921	.913	.417	.062	.072	.164	.246	.885	.761	.761

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		31	32	33	34	35	36	37	38	39	40
41	Scye Circ	.287	.351	.204	.624	.541	.722	.661	.308	.354	.139
42	Scye Depth	.312	.348	.150	.395	.391	.393	.381	.340	.352	.223
43	Shoulder Circ	.391	.447	.170	.609	.525	.682	.656	.416	.465	.255
44	Shoulder Lgth	.310	.297	.078	.077	.241	.047	.050	.358	.393	.292
45	Sitting Height	.504	.534	.357	.257	.255	.274	.330	.689	.760	.501
46	Slv Lgth Spine-El	.711	.739	.345	.380	.365	.414	.465	.802	.791	.659
47	Slv Lgth Spine-Sc	.356	.367	.173	.295	.379	.425	.417	.416	.441	.272
48	Slv Lgth Spine-Wr	.820	.851	.361	.392	.321	.418	.477	.879	.836	.772
49	Sleeve Outseam	.842	.867	.359	.289	.183	.290	.369	.890	.814	.835
50	Span	.876	.896	.352	.280	.201	.310	.387	.930	.867	.867
51	Stature	.868	.889	.452	.312	.258	.312	.379	.945	.890	.847
52	Tenth Rib Hght	.914	.926	.448	.307	.205	.302	.353	.940	.856	.882
53	Thigh Circ	.250	.347	.129	.851	.464	.563	.515	.250	.291	.043
54	Thigh Clearance	.235	.317	.106	.690	.403	.568	.505	.227	.266	.058
55	Thumbtip Reach	.822	.848	.355	.341	.224	.358	.412	.874	.777	.789
56	Vert Trnk Circ USA	.476	.531	.328	.599	.527	.562	.557	.588	.660	.346
57	Waist Back Lgth, O	.399	.445	.249	.359	.327	.362	.398	.478	.512	.336
58	Waist Circ, NI	.259	.311	.097	.628	.559	.691	.625	.216	.234	.089
59	Waist Circ, O	.213	.268	.092	.622	.527	.603	.545	.152	.165	.031
60	Waist Front Lgth, O	.313	.343	.224	.339	.451	.335	.277	.409	.476	.228
61	Waist Hght, NI	.891	.904	.425	.351	.233	.336	.379	.910	.827	.842
62	Waist Hght Sit, NI	.279	.300	.212	.331	.182	.294	.274	.365	.439	.205
63	Waist Hght Sit, O	.312	.352	.211	.399	.203	.337	.332	.426	.487	.243
64	Waist Hip Lgth	.216	.205	.080	-.058	-.064	*.101	-.046	.346	.365	.262
65	Waist NI Waist O Lg	.061	.079	.054	.265	.192	.230	.185	.036	.067	-.035
66	Weight	.483	.568	.244	.832	.594	.716	.676	.499	.523	.291
67	Wrist Cen Grip Lgth	.320	.333	.208	.241	.198	.236	.220	.325	.310	.280
68	Wrist Circ	.419	.484	.283	.556	.374	.591	.567	.467	.502	.341
69	Wrist Wall Lgth	.796	.818	.342	.320	.216	.345	.400	.823	.755	.766
70	Wrist Wall Lgth, Ex	.769	.796	.323	.320	.200	.362	.441	.807	.752	.745

\* Correlation not significant at  $p \leq .05$



## Female Correlation Coefficients

	41	42	43	44	45	46	47	48	49	50
1 Ab Ext Depth, S	.624	.374	.661	.062	.044	.254	.282	.250	.134	.125
2 Acromial Ht, Sitting	.397	.235	.306	.099	.874	.499	.341	.500	.497	.496
3 Ankle Circ	.480	.373	.465	.153	.352	.380	.318	.359	.240	.264
4 Biceps C Flex	.757	.367	.737	.049	*.096	.282	.330	.282	.130	.131
5 Bideloid Bdth S	.722	.372	.924	.332	.329	.588	.606	.560	.363	.430
6 Bustpt-Bustpt Bdth	.446	.213	.465	.128	.163	.304	.328	.305	.211	.219
7 Buttock Circ	.688	.462	.718	.141	.335	.440	.376	.448	.328	.322
8 Buttock Height	.368	.334	.452	.263	.518	.713	.336	.829	.847	.872
9 Buttock-Knee Lgth	.486	.400	.571	.288	.480	.722	.415	.802	.770	.784
10 Buttock-Pop Lgth	.375	.334	.460	.271	.449	.685	.352	.774	.774	.784
11 Calf Circumference	.548	.334	.580	.135	.247	.382	.345	.364	.228	.253
12 Calf Height	.276	.265	.368	.209	.383	.596	.262	.723	.757	.770
13 Chest Circ	.801	.406	.824	.110	.190	.428	.461	.419	.261	.279
14 Chest Circ at Scye	.822	.382	.905	.170	.261	.497	.535	.481	.304	.341
15 Chest Depth	.713	.374	.703	.053	.081	.310	.360	.303	.169	.157
16 Crotch Height	.241	.274	.345	.285	.536	.717	.327	.826	.866	.890
17 Crotch Length, O	.501	.342	.505	.150	.535	.430	.305	.429	.364	.366
18 Crotch Lgth Pos, O	.244	.206	.275	.162	.451	.323	.188	.311	.293	.293
19 Elbow Circ	.795	.430	.762	.111	.318	.484	.410	.498	.366	.375
20 Elbow Rest Height	.202	.025	.058	*-.095	.570	-.070	.110	-.111	-.152	-.133
21 Eye Height, Sitting	.259	.345	.295	.342	.977	.581	.383	.558	.509	.551
22 Forearm Circ, Flex	.754	.363	.717	.073	.224	.397	.388	.411	.275	.292
23 Forearm-Forearm B	.735	.374	.771	*.099	.233	.453	.481	.429	.272	.303
24 Forearm-Hand Lgth	.345	.298	.437	.279	.474	.689	.323	.855	.885	.934
25 Functional Leg Lgth	.441	.421	.518	.303	.545	.740	.363	.841	.833	.854
26 Gluteal Furrow Hght	.292	.306	.388	.284	.519	.705	.335	.820	.851	.878
27 Head Circ	.388	.241	.412	.125	.356	.418	.327	.444	.398	.423
28 Hip Breadth, Sitting	.566	.445	.589	.131	.330	.405	.325	.406	.293	.281
29 Interscye II	.490	.395	.698	.441	.371	.571	.607	.539	.383	.429
30 Knee Circ	.624	.406	.623	.113	.315	.467	.344	.483	.389	.380
31 Knee Height, Mid	.287	.312	.391	.310	.504	.711	.356	.820	.842	.876
32 Knee Height, Sitting	.351	.348	.447	.297	.534	.739	.367	.851	.867	.896
33 Lateral Malleolus H	.204	.150	.170	.078	.357	.345	.173	.361	.359	.352
34 Lower Thigh Circ	.624	.395	.609	.077	.257	.380	.295	.392	.289	.280
35 Neck Bustpt Lgth	.541	.391	.525	.241	.255	.365	.379	.321	.183	.201
36 Neck Circ	.722	.393	.682	.047	.274	.414	.425	.418	.290	.310
37 Neck Circ, Base	.661	.381	.656	.059	.330	.465	.417	.477	.369	.387
38 Ovrhd Fngtrp Rch E	.308	.340	.416	.358	.689	.802	.416	.879	.890	.930
39 Ovrhd Fngtrp Rch S	.354	.352	.465	.393	.760	.791	.441	.836	.814	.867
40 Popliteal Height	.139	.223	.255	.292	.501	.659	.272	.772	.835	.867

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		41	42	43	44	45	46	47	48	49	50
41	Scye Circ		.407	.761	-.033	.283	.428	.379	.435	.332	
42	Scye Depth	.407		.428	.390	.364	.425	.297	.424	.313	.314
43	Shoulder Circ	.761	.428		.333	.316	.601	.598	.585	.393	.336
44	Shoulder Lgth	-.033	.390	.333		.335	.470	.417	.420	.234	.448
45	Sitting Height	.283	.364	.316	.335		.590	.385	.570	.521	.381
46	Slv Lgth Spine-El	.428	.425	.601	.470	.590		.722	.946	.770	.560
47	Slv Lgth Spine-Sc	.379	.297	.598	.417	.385	.722		.610	.317	.814
48	Slv Lgth Spine-Wr	.435	.424	.585	.420	.570	.946	.610		.881	.401
49	Sleeve Outseam	.332	.313	.393	.234	.521	.770	.317	.881		.919
50	Span	.314	.336	.448	.381	.560	.814	.401	.919	.934	.934
51	Stature	.337	.384	.408	.354	.823	.764	.407	.829	.822	.858
52	Tenth Rib Hght	.326	.327	.397	.300	.664	.735	.363	.828	.842	.869
53	Thigh Circ	.674	.403	.694	*.087	.236	.360	.334	.368	.248	.240
54	Thigh Clearance	.636	.278	.646	.048	.180	.321	.338	.340	.231	.231
55	Thumbtip Reach	.363	.354	.451	.301	.509	.755	.364	.859	.880	.891
56	Vert Trnk Circ USA	.658	.469	.633	.210	.722	.583	.438	.576	.467	.492
57	Waist Back Lgth, O	.378	.645	.368	.253	.609	.437	.289	.456	.391	.405
58	Waist Circ, NI	.767	.407	.768	.068	*.100	.357	.366	.367	.230	.244
59	Waist Circ, O	.702	.432	.690	.062	.081	.295	.305	.302	.170	.168
60	Waist Front Lgth, O	.449	.352	.440	.233	.613	.398	.337	.378	.277	.324
61	Waist Hght, NI	.371	.365	.452	.297	.644	.734	.401	.821	.818	.841
62	Waist Hght Sit, NI	.338	.272	.343	.146	.555	.346	.317	.333	.267	.270
63	Waist Hght Sit, O	.391	.228	.394	.130	.597	.395	.326	.379	.320	.325
64	Waist Hip Lgth	-.146	.020	-.099	.196	.458	.239	.131	.214	.235	.247
65	Waist NI Waist O Lg	.308	.203	.292	.010	.064	*.101	.165	*.096	.027	.018
66	Weight	.811	.506	.845	.194	.425	.591	.503	.607	.458	.480
67	Wrist Cen Grip Lgth	.267	.214	.279	.170	.255	.252	.125	.311	.275	.345
68	Wrist Circ	.620	.365	.596	.206	.430	.534	.421	.561	.455	.487
69	Wrist Wall Lgth	.360	.353	.439	.290	.493	.745	.353	.845	.867	.865
70	Wrist Wall Lgth, Ex	.371	.400	.435	.255	.505	.729	.310	.830	.850	.848

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		51	52	53	54	55	56	57	58	59	60
1	Ab Ext Depth, S	.127	.143	.682	.598	.233	.519	.373	.849	.891	.425
2	Acromial Ht, Sitting	.734	.633	.270	.218	.464	.743	.568	.177	.144	.567
3	Ankle Circ	.344	.298	.560	.452	.295	.526	.334	.431	.411	.311
4	Biceps C Flex	.136	.137	.765	.687	.192	.511	.249	.732	.688	.294
5	Bideltoid Bdth S	.390	.365	.671	.622	.402	.624	.337	.719	.647	.428
6	Bustpt-Bustpt Bdth	.232	.206	.349	.348	.242	.371	.234	.497	.457	.311
7	Buttock Circ	.382	.353	.928	.760	.383	.706	.421	.722	.747	.407
8	Buttock Height	.881	.925	.321	.288	.822	.520	.450	.324	.294	.352
9	Buttock-Knee Lgth	.803	.827	.559	.478	.773	.632	.444	.476	.449	.382
10	Buttock-Pop Lgth	.796	.822	.424	.358	.761	.540	.390	.363	.343	.317
11	Calf Circumference	.279	.265	.726	.590	.281	.523	.268	.529	.490	.299
12	Calf Height	.737	.796	.310	.270	.736	.423	.369	.281	.258	.270
13	Chest Circ	.272	.267	.667	.613	.339	.635	.357	.863	.785	.468
14	Chest Circ at Scye	.332	.329	.683	.649	.378	.646	.343	.817	.729	.471
15	Chest Depth	.150	.168	.627	.584	.237	.544	.293	.805	.749	.399
16	Crotch Height	.896	.934	.210	.189	.825	.445	.395	.184	.139	.291
17	Crotch Length, O	.498	.469	.600	.484	.378	.702	.194	.404	.290	.240
18	Crotch Lgth Pos, O	.402	.362	.355	.248	.296	.472	.046	.147	.032	.080
19	Elbow Circ	.384	.368	.731	.640	.415	.665	.394	.715	.654	.404
20	Elbow Rest Height	.198	.076	.137	.079	-.134	.479	.349	.037	.049	.423
21	Eye Height, Sitting	.803	.649	.215	.170	.492	.695	.577	.074	.047	.588
22	Forearm Circ, Flex	.278	.279	.673	.597	.323	.567	.302	.668	.579	.315
23	Forearm-Forearm B	.289	.276	.641	.588	.323	.598	.336	.754	.694	.381
24	Forearm-Hand Lgth	.798	.828	.290	.291	.871	.472	.399	.299	.221	.288
25	Functional Leg Lgth	.883	.911	.450	.389	.828	.628	.497	.412	.396	.419
26	Gluteal Furrow Hght	.884	.925	.240	.210	.817	.459	.420	.253	.205	.318
27	Head Circ	.438	.420	.343	.323	.424	.427	.305	.329	.276	.286
28	Hip Breadth, Sitting	.365	.337	.879	.641	.343	.643	.416	.605	.661	.396
29	Interscye II	.414	.398	.422	.391	.462	.467	.360	.479	.415	.313
30	Knee Circ	.403	.404	.825	.685	.435	.628	.386	.630	.618	.366
31	Knee Height, Mid	.868	.914	.250	.235	.822	.476	.399	.259	.213	.313
32	Knee Height, Sitting	.889	.926	.347	.317	.848	.531	.446	.311	.268	.343
33	Lateral Malleolus H	.452	.448	.129	.106	.355	.328	.249	*.097	*.092	.224
34	Lower Thigh Circ	.312	.307	.851	.690	.341	.599	.359	.628	.622	.339
35	Neck Bustpt Lgth	.258	.205	.464	.403	.224	.527	.327	.559	.527	.451
36	Neck Circ	.312	.302	.563	.568	.358	.562	.362	.691	.603	.335
37	Neck Circ, Base	.379	.353	.515	.505	.412	.557	.398	.625	.545	.277
38	Ovrhd Fngrtp Rch E	.945	.940	.250	.227	.847	.588	.478	.216	.152	.409
39	Ovrhd Fngrtp Rch S	.890	.856	.291	.266	.777	.660	.512	.234	.165	.476
40	Popliteal Height	.847	.82	.043	.058	.789	.346	.336	.089	.031	.228

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		51	52	53	54	55	56	57	58	59	60
41	Scye Circ	.337	.326	.674	.636	.363	.658	.378	.767	.702	.449
42	Scye Depth	.384	.327	.403	.278	.354	.469	.645	.407	.432	.352
43	Shoulder Circ	.409	.397	.694	.646	.451	.633	.368	.768	.690	.440
44	Shoulder Lgth	.354	.300	.087	.048	.301	.210	.453	.068	.062	.233
45	Sitting Height	.823	.664	.236	.180	.509	.722	.609	*.100	.081	.613
46	Slv Lgth Spine-El	.764	.735	.360	.321	.755	.583	.437	.357	.295	.398
47	Slv Lgth Spine-Sc	.407	.363	.334	.338	.365	.438	.289	.366	.305	.337
48	Slv Lgth Spine-Wr	.829	.828	.368	.340	.859	.576	.456	.367	.302	.377
49	Sleeve Outseam	.822	.842	.248	.231	.880	.467	.391	.230	.170	.277
50	Span	.858	.869	.240	.231	.891	.492	.405	.244	.168	.324
51	Stature		.946	.281	.232	.796	.684	.572	.217	.180	.523
52	Tenth Rib Hght	.946		.275	.243	.808	.601	.464	.231	.176	.398
53	Thigh Circ	.281	.275		.812	.304	.626	.352	.696	.713	.349
54	Thigh Clearance	.232	.243	.812		.283	.521	.252	.629	.627	.280
55	Thumbtip Reach	.796	.808	.304	.283		.508	.433	.327	.266	.339
56	Vert Trnk Circ USA	.684	.601	.626	.521	.508		.657	.573	.561	.699
57	Waist Back Lgth, O	.572	.464	.352	.252	.433	.657		.371	.512	.698
58	Waist Circ, NI	.217	.231	.696	.629	.327	.573	.371		.888	.432
59	Waist Circ, O	.180	.176	.713	.627	.266	.561	.512	.888		.509
60	Waist Front Lgth, O	.523	.398	.349	.280	.339	.699	.698	.432	.509	
61	Waist Hght, NI	.915	.942	.337	.304	.798	.611	.499	.308	.268	.423
62	Waist Hght Sit, NI	.433	.407	.354	.338	.278	.527	.406	.267	.269	.393
63	Waist Hght Sit, O	.501	.439	.461	.453	.312	.589	.224	.225	.162	.250
64	Waist Hip Lgth	.365	.322	-.100	-.118	.180	.181	-.146	-.303	-.473	*-.105
65	Waist NI Waist O Lg	.062	.070	.299	.298	.083	.273	.441	.403	.538	.423
66	Weight	.530	.514	.878	.769	.521	.802	.508	.830	.793	.534
67	Wrist Cen Grip Lgth	.335	.340	.229	.184	.347	.321	.248	.247	.234	.256
68	Wrist Circ	.475	.443	.475	.436	.464	.607	.378	.493	.408	.377
69	Wrist Wall Lgth	.773	.784	.288	.271	.985	.492	.427	.314	.258	.328
70	Wrist Wall Lgth, Ex	.765	.772	.273	.216	.889	.494	.464	.309	.260	.321

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		61	62	63	64	65	66	67	68	69	70
1	Ab Ext Depth, S	.218	.240	.160	-.359	.442	.759	.199	.391	.223	.202
2	Acromial Ht, Sitting	.611	.562	.580	.387	.103	.448	.246	.419	.445	.448
3	Ankle Circ	.308	.259	.376	.051	.120	.642	.249	.618	.274	.300
4	Biceps C Flex	.208	.277	.319	-.191	.310	.796	.243	.553	.180	.181
5	Bideloid Bdth S	.417	.335	.417	-.055	.259	.806	.282	.562	.385	.375
6	Bustpt-Bustpt Bdth	.237	.148	.142	-.108	.197	.478	.118	.337	.237	.211
7	Buttock Circ	.415	.388	.509	-.006	.294	.899	.263	.513	.365	.350
8	Buttock Height	.905	.302	.340	.061	.096	.541	.358	.431	.803	.806
9	Buttock-Knee Lgth	.836	.325	.421	.144	.157	.721	.315	.485	.748	.710
10	Buttock-Pop Lgth	.821	.260	.367	.165	.092	.587	.272	.393	.740	.705
11	Calf Circumference	.297	.265	.348	-.008	.186	.748	.231	.520	.259	.270
12	Calf Height	.792	.262	.251	*.088	.110	.471	.317	.378	.708	.689
13	Chest Circ	.314	.242	.285	-.217	.310	.824	.235	.533	.331	.331
14	Chest Circ at Scye	.371	.303	.388	-.144	.290	.836	.259	.564	.373	.369
15	Chest Depth	.223	.234	.238	-.242	.343	.752	.157	.456	.229	.231
16	Crotch Height	.904	.269	.317	.242	.021	.431	.303	.373	.803	.787
17	Crotch Length, O	.464	.437	.733	.456	-.056	.647	.246	.478	.363	.371
18	Crotch Lgth Pos, O	.354	.322	.573	.538	-.154	.375	.134	.325	.276	.254
19	Elbow Circ	.418	.360	.401	-.077	.288	.848	.313	.768	.393	.390
20	Elbow Rest Height	.069	.425	.407	.225	*.101	.168	.064	.140	-.146	-.120
21	Eye Height, Sitting	.630	.548	.593	.477	.054	.396	.241	.417	.475	.479
22	Forearm Circ, Flex	.320	.295	.356	*.103	.237	.775	.283	.722	.303	.312
23	Forearm-Forearm B	.335	.302	.350	-.122	.288	.777	.278	.517	.315	.315
24	Forearm-Hand Lgth	.814	.273	.311	.180	.064	.509	.395	.524	.830	.799
25	Functional Leg Lgth	.897	.320	.387	.163	.125	.657	.346	.476	.809	.798
26	Gluteal Furrow Hght	.904	.285	.305	.177	.065	.464	.328	.398	.797	.790
27	Head Circ	.410	.215	.278	.054	*.091	.476	.171	.423	.406	.391
28	Hip Breadth, Sitting	.389	.358	.434	-.016	.275	.813	.235	.421	.327	.315
29	Interscye II	.420	.310	.310	.037	.177	.574	.209	.436	.455	.435
30	Knee Circ	.444	.362	.426	-.017	.262	.846	.252	.599	.413	.405
31	Knee Height, Mid	.891	.279	.312	.216	.061	.483	.320	.419	.796	.769
32	Knee Height, Sitting	.904	.299	.352	.205	.079	.568	.333	.484	.818	.796
33	Lateral Malleolus H	.425	.212	.211	.80	.054	.244	.208	.283	.342	.323
34	Lower Thigh Circ	.351	.331	.399	-.057	.265	.832	.241	.556	.320	.320
35	Neck Bustpt Lgth	.233	.182	.207	-.064	.192	.594	.198	.374	.216	.200
36	Neck Circ	.336	.294	.337	-.101	.230	.716	.236	.591	.345	.362
37	Neck Circ, Base	.379	.274	.332	-.046	.185	.676	.220	.567	.400	.441
38	Ovrhd Fngtrp Rch E	.910	.365	.426	.346	.036	.499	.325	.467	.823	.807
39	Ovrhd Fngtrp Rch S	.827	.439	.487	.364	.067	.523	.310	.502	.755	.752
40	Popliteal Height	.842	.205	.243	.262	-.035	.291	.280	.341	.766	.754

\* Correlation not significant at  $p \leq .05$

## Female Correlation Coefficients

		61	62	63	64	65	66	67	68	69	70
41	Scye Circ	.371	.338	.391	-.146	.308	.811	.267	.620	.360	.371
42	Scye Depth	.365	.272	.228	.019	.203	.506	.214	.365	.354	.400
43	Shoulder Circ	.452	.343	.394	*-.099	.292	.845	.279	.596	.439	.435
44	Shoulder Lgth	.297	.146	.130	.196	.010	.194	.170	.206	.290	.255
45	Sitting Height	.644	.555	.597	.458	.064	.425	.255	.430	.493	.505
46	Siv Lgth Spine-El	.734	.346	.395	.239	*.101	.591	.252	.534	.745	.729
47	Siv Lgth Spine-Sc	.401	.317	.326	.131	.165	.503	.125	.421	.353	.310
48	Siv Lgth Spine-Wr	.821	.333	.379	.214	*.096	.607	.311	.561	.845	.830
49	Sleeve Outseam	.818	.267	.320	.235	.027	.458	.275	.455	.867	.850
50	Span	.841	.270	.325	.247	.018	.480	.348	.487	.865	.848
51	Stature	.915	.433	.501	.365	.062	.530	.335	.475	.773	.765
52	Tenth Rib Hght	.942	.407	.439	.322	.070	.514	.340	.443	.784	.772
53	Thigh Circ	.337	.354	.461	*-.100	.299	.878	.229	.475	.288	.273
54	Thigh Clearance	.304	.338	.453	-.118	.298	.769	.184	.436	.271	.216
55	Thumbtip Reach	.798	.278	.312	.180	*.083	.521	.347	.464	.985	.890
56	Vert Trnk Circ USA	.611	.527	.589	.181	.273	.802	.321	.607	.492	.494
57	Waist Back Lgth, O	.499	.406	.224	-.146	.441	.508	.248	.378	.427	.464
58	Waist Circ, NI	.308	.267	.225	-.303	.403	.830	.247	.493	.314	.309
59	Waist Circ, O	.268	.269	.162	-.473	.538	.793	.234	.408	.258	.260
60	Waist Front Lgth, O	.423	.393	.250	-.105	.423	.534	.256	.377	.328	.321
61	Waist Hght, NI		.603	.441	.254	.313	.564	.349	.444	.774	.755
62	Waist Hght Sit, NI	.603		.503	.173	.675	.430	.223	.312	.263	.259
63	Waist Hght Sit, O	.441	.503		.442	-.039	.503	.186	.401	.297	.288
64	Waist Hip Lgth	.254	.173	.442		-.444	-.047	.002	.080	.166	.137
65	Waist NI Waist O Lg	.313	.675	-.039	-.444		.340	.108	.128	.080	.060
66	Weight	.565	.430	.503	-.047	.340		.330	.664	.500	.487
67	Wrist Cen Grip Lgth	.349	.223	.186	.002	.108	.330		.326	.301	.283
68	Wrist Circ	.444	.312	.401	.080	.128	.664	.326		.459	.501
69	Wrist Wall Lgth	.774	.263	.297	.166	.080	.500	.301	.435		.904
70	Wrist Wall Lgth, Ex	.755	.259	.288	.137	.060	.487	.283	.459	.904	

\* Correlation not significant at  $p \leq .05$

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## **CHAPTER IV**

### **BIVARIATE TABLES**



Crotch Height vs. Buttock Circumference: **Males**

Buttock Circ	Crotch Height															Total
	675	693	711	729	747	765	783	801	819	837	855	873	891	909	927	
821					1.4		2.7	2.7				1.4			8.0	
849				1.4		1.4	2.7	4.1		1.4	1.4				12.0	
877				4.1		5.4	5.4	10.8	6.8	2.7	1.4	1.4	1.4	1.4	41.0	
905	1.4		1.4	2.7	4.1	12.2	13.6	16.3	17.6	21.7	5.4	5.4	5.4	1.4	108.0	
933			2.7	2.7	5.4	16.3	19.0	21.7	17.6	17.6	17.6	4.1	6.8	4.1	136.0	
961		1.4	1.4	4.1	4.1	21.7	13.6	21.7	31.2	19.0	19.0	17.6	2.7	4.1	5.4 167.0	
989		1.4	1.4	1.4	5.4	12.2	9.5	32.5	31.2	29.8	17.6	14.9	5.4	4.1	167.0	
1017				1.4	1.4	6.8	13.6	24.4	27.1	24.4	21.7	13.6	9.5	1.4	2.7 148.0	
1045				1.4	5.4	1.4	5.4	13.6	14.9	17.6	12.2	16.3	5.4	8.1	2.7 104.0	
1073						2.7	5.4	2.7	17.6	6.8	6.8	10.8	4.1	4.1	2.7 64.0	
1101						1.4		4.1	5.4	5.4	2.7	2.7	2.7	1.4	1.4 27.0	
1129						1.4		4.1			2.7	1.4	1.4	1.4	1.4 14.0	
1157										1.4			1.4	1.4	4.0	
1185															0.0	
1213					1.4										1.0	
Total	1.0	3.0	7.0	19.0	28.0	83.0	91.0	159.0	169.0	148.0	108.0	89.0	46.0	33.0	16.0 1000.0	

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Buttock Circumference	994.97	62.12	0.260	4.560	0.235	0.032
Crotch Height	831.31	44.64	0.260	7.271	0.288	0.039

## Crotch Height vs. Buttock Circumference: Females

	Crotch Height													
	594	615	636	657	678	699	720	741	762	783	804	825	846	888
Buttock Circ														
783				1.7				1.7						
809						1.7	1.7							
835			1.7	1.7	1.7	5.2	5.2	1.7	3.4	1.7				
861			1.7		1.7	5.2	5.2	8.6	5.2	6.9	1.7			
887				3.4	1.7	10.3	17.2	17.2	10.3	22.3	6.9			
913	1.7		1.7	3.4	10.3	18.9	24.1	36.1	8.6	3.4	18.9	8.6	1.7	1.7
939				3.4	12.0	20.6	20.6	41.2	18.9	20.6	18.9	10.3		3.4
965				8.6	3.4	15.5	32.6	20.6	32.6	15.5	12.0	8.6	1.7	
991				1.7	8.6	3.4	27.5	27.5	27.5	18.9	10.3	6.9	5.2	1.7
1017				3.4	3.4	3.4	20.6	18.9	24.1	17.2	5.2	5.2	5.2	
1043					1.7		6.9	8.6	15.5	10.3	10.3	8.6		1.7
1069						3.4	5.2	5.2	10.3	6.9	1.7	3.4	1.7	3.4
1095							1.7	1.7	6.9	3.4	5.2		1.7	
1121									1.7	1.7	1.7			1.7
1147									3.4		1.7			1.7
Total	2.0	0.0	5.0	27.0	45.0	88.0	168.0	189.0	168.0	129.0	95.0	52.0	17.0	10.0

Total 2.0 0.0 5.0 27.0 45.0 88.0 168.0 189.0 168.0 129.0 95.0 52.0 17.0 10.0 5.0 1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Buttock Circumference	974.46	62.46	0.265	5.316	0.304	0.046
Crotch Height	760.83	45.51	0.265	6.595	0.231	0.035

Crotch Height vs. Vertical Trunk Circumference (USA): **Males**

	Crotch Height														
	675	693	711	729	747	765	783	801	819	837	855	873	891	909	927
Vertical Trunk															Total
1425	1.4				1.4	1.4	1.4								5.0
1456				1.4		2.7	1.4	1.4							7.0
1487		1.4		1.4		1.4	4.1	6.8		1.4	1.4				18.0
1518			1.4	2.7	1.4	5.4	8.1	10.8	1.4	5.4		4.1	1.4		42.0
1549				5.4	1.4	17.6	14.9	12.2	17.6	13.6	4.1	2.7	1.4	2.7	93.0
1580			1.4	4.1	6.8	19.0	6.8	23.0	17.6	20.3	9.5	6.8		2.7	118.0
1611			1.4	1.4	6.8	10.8	16.3	19.0	29.8	21.7	20.3	12.2	4.1	2.7	146.0
1642			1.4	1.4	5.4	10.8	17.6	29.8	27.1	24.4	19.0	14.9	4.1	4.1	161.0
1673		1.4	1.4		1.4	4.1	12.2	23.0	27.1	20.3	14.9	10.8	10.8	4.1	137.0
1704					1.4	1.4	4.1	16.3	25.7	10.8	24.4	8.1	6.8	5.4	107.0
1735						6.8	1.4	4.1	14.9	14.9	5.4	12.2	9.5	2.7	72.0
1766				1.4	1.4	1.4	2.7	5.4	4.1	6.8	2.7	9.5	4.1	4.1	46.0
1797								5.4	1.4	8.1	2.7	1.4	2.7		24.0
1828					1.4			1.4	1.4		4.1	4.1	1.4	1.4	16.0
1859									1.4			2.7		2.7	7.0
Totals	1.0	3.0	7.0	19.0	28.0	83.0	91.0	159.0	169.0	148.0	108.0	89.0	46.0	33.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Crotch Height	831.31	44.64	0.381	6.255	0.368	0.033
Vertical Trunk Circ (USA)	1657.88	79.12	0.381	4.394	0.394	0.035

## Crotch Height vs. Vertical Trunk Circumference (USA): Females

Vertical Trunk	594	615	636	657	678	699	Crotch Height										909	Total
							720	741	762	783	804	825	846	888				
1365				1.7		1.7											3.0	
1392			1.7	3.4	3.4	1.7	5.2	1.7									17.0	
1419				1.7		6.9	8.6	6.9	1.7	3.4	1.7						31.0	
1446				5.2	5.2	12.0	12.0	8.6	1.7	6.9							52.0	
1473			1.7	5.2	6.9	18.9	20.6	29.2	10.3	8.6	6.9	5.2					113.0	
1500	1.7		1.7	3.4	5.2	12.0	30.9	41.2	25.8	10.3	8.6		1.7				143.0	
1527				3.4	8.6	20.6	25.8	41.2	32.6	13.7	8.6	3.4	1.7	5.2			165.0	
1554				1.7	6.9	8.6	25.8	25.8	29.2	36.1	22.3	10.3	1.7				168.0	
1581					6.9	5.2	17.2	13.7	22.3	18.9	18.9	10.3	3.4	1.7			119.0	
1608					1.7		15.5	13.7	17.2	10.3	6.9	12.0	1.7	1.7	1.7		82.0	
1635				1.7			5.2	5.2	15.5	17.2	8.6	5.2	3.4				62.0	
1662							1.7		3.4	1.7	1.7	5.2	3.4				17.0	
1689								1.7	5.2		5.2					1.7	14.0	
1716									3.4		3.4			1.7			9.0	
1743										1.7	1.7					1.7	5.0	
Totals	2.0	0.0	5.0	27.0	45.0	88.0	168.0	189.0	168.0	129.0	95.0	52.0	17.0	10.0	5.0	5.0	1000.0	

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Crotch Height	760.83	45.51	0.44	5.604	0.379	0.032
Vertical Trunk Circ (USA)	1551.13	66.18	0.44	3.106	0.510	0.043

## Crotch Height vs. Waist Circumference (Natural Indentation): Males

Waist Circ (NI)	Crotch Height										Total
	675	693	711	729	747	765	783	801	819	837	
682						1.4	2.7	4.1	1.4		9.0
710				1.4	1.4	1.4	1.4	5.4	6.8	1.4	20.0
738	1.4			4.1		4.1	10.8	10.8	8.1	6.8	58.0
766			1.4			6.8	13.6	10.8	9.5	16.3	77.0
794			1.4		4.1	8.1	8.1	9.5	17.6	27.1	110.0
822			1.4	4.1	2.7	24.4	12.2	23.0	28.5	16.3	145.0
850		1.4		2.7	6.8	12.2	5.4	24.4	23.0	16.3	137.0
878			1.4	1.4	5.4	9.5	8.1	25.7	21.7	23.0	141.0
906		1.4		2.7		5.4	13.6	10.8	10.8	10.8	95.0
934			1.4	1.4	1.4	2.7	6.8	10.8	20.3	12.2	79.0
962					2.7	2.7	2.7	13.6	13.6	10.8	70.0
990				1.4	1.4	2.7	2.7	2.7	5.4	4.1	30.0
1018					2.7	1.4	1.4	2.7	1.4	4.1	19.0
1046							1.4	2.7	1.4	1.4	7.0
1074								1.4			3.0
Totals	1.0	3.0	7.0	19.0	28.0	83.0	91.0	159.0	169.0	148.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Crotch Height	831.31	44.64	0.110	8.482	0.101	0.033
Waist Circumference (NI)	868.19	75.69	0.110	6.081	0.121	0.040

## Crotch Height vs. Waist Circumference (Natural Indentation): Females

Waist Circ (NI)	594	615	636	657	678	699	720	Crotch Height		762	783	804	825	846	888	909	Total
								741	741								
573			1.7	1.7		1.7			1.7								7.0
602				1.7		3.4	6.9	10.3	3.4	3.4	3.4	5.2					34.0
631				1.7	5.2	5.2	12.0	17.2	6.9	10.3	10.3	6.9			1.7		65.0
660			1.7	1.7	5.2	18.9	27.5	37.8	13.7	20.6	20.6	13.7	10.3	3.4			155.0
689				6.9	10.3	20.6	37.8	34.4	36.1	13.7	13.7	13.7	13.7	3.4	1.7		192.0
718	1.7			8.6	5.2	15.5	27.5	27.5	24.1	32.6	20.6	5.2	3.4	3.4	1.7		172.0
747			1.7	3.4	8.6	10.3	18.9	27.5	25.8	20.6	20.6	10.3	5.2		1.7		134.0
776					3.4	5.2	20.6	20.6	10.3	8.6	8.6	5.2	5.2			3.4	82.0
805				1.7	1.7	6.9	12.0	3.4	17.2	13.7	13.7	5.2	5.2	3.4	3.4		74.0
834							1.7	3.4	13.7	1.7	1.7	6.9	3.4	1.7			33.0
863					3.4		3.4	6.9	6.9			5.2	3.4	1.7			31.0
892				1.7				1.7	5.2	1.7	1.7					1.7	12.0
921									1.7								2.0
950									1.7	1.7	1.7	1.7					5.0
979													1.7				2.0
Totals	2.0	0.0	5.0	27.0	45.0	88.0	168.0	189.0	168.0	129.0	95.0	52.0	52.0	17.0	10.0	5.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Crotch Height	760.83	45.51	0.162	7.531	0.144	0.037
Waist Circumference (NI)	733.77	67.98	0.162	4.549	0.181	0.046

## Crotch Height vs. Waist Circumference (Omphalion): Males

Waist Circ (O)	Crotch Height														Total
	675	693	711	729	747	765	783	801	819	837	855	873	891	909	927
679					1.4	1.4	1.4	2.7			1.4				8.0
713				1.4			5.4	5.4	5.4	1.4	1.4	1.4			22.0
747	1.4			4.1		6.8	5.4	10.8	10.8	10.8	1.4	2.7	2.7	2.7	60.0
781			2.7		1.4	9.5	16.3	16.3	16.3	12.2	2.7	5.4	6.8	2.7	92.0
815				2.7	2.7	8.1	10.8	13.6	16.3	28.5	21.7	5.4	2.7	2.7	117.0
849				4.1	8.1	23.0	10.8	28.5	24.4	19.0	20.3	8.1	6.8	5.4	163.0
883		1.4	1.4		5.4	14.9	8.1	16.3	27.1	17.6	20.3	19	4.1	6.8	145.0
917		1.4	1.4	2.7	1.4	6.8	9.5	28.5	17.6	16.3	12.2	17.6	4.1	1.4	122.0
951				2.7	1.4	6.8	12.2	9.5	13.6	20.3	16.3	8.1	6.8	1.4	100.0
985			1.4	1.4	5.4		5.4	12.2	19.0	8.1	2.7	12.2	5.4	2.7	79.0
1019						1.4	4.1	6.8	13.6	8.1	5.4	5.4	5.4	4.1	57.0
1053						2.7	1.4	4.1	2.7	4.1	1.4	2.7	1.4	1.4	22.0
1087						1.4		2.7	1.4	1.4	1.4	1.4		1.4	11.0
1121									1.4						1.0
1155					1.4			1.4							3.0
Totals	1.0	3.0	7.0	19.0	28.0	83.0	91.0	159.0	169.0	148.0	108.0	89.0	46.0	33.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Crotch Height	831.31	44.64	0.138	8.287	0.133	0.035
Waist Circumference (O)	896.72	86.76	0.138	5.611	0.142	0.038

## Crotch Height vs. Waist Circumference (Omphalion): Females

Waist Circ (O)	594	615	636	657	678	699	720	Crotch Height				783	804	825	846	888	909	Total
								741	762	783	804							
632			1.7	1.7	1.7	1.7	3.4	3.4	1.7	1.7	3.4							21.0
663				3.4	5.2	6.9	13.7	13.7	6.9	8.6	5.2							64.0
694			1.7	1.7	1.7	15.5	8.6	24.1	6.9	10.3	8.6			6.9	1.7	1.7		89.0
725	1.7			1.7	5.2	12.0	25.8	37.8	15.5	17.2	12.0			12.0	3.4			144.0
756				3.4	1.7	8.6	18.9	27.5	29.2	17.2	24.1			3.4		1.7		136.0
787				5.2	5.2	13.7	25.8	18.9	22.3	25.8	3.4			1.7	3.4			125.0
818				3.4	6.9	15.5	22.3	22.3	24.1	15.5	6.9			10.3	1.7	3.4		132.0
849		1.7	5.2	5.2	5.2	5.2	22.3	8.6	12.0	8.6	10.3			1.7	1.7			82.0
880				5.2	5.2	1.7	6.9	8.6	12.0	6.9	5.2			3.4		3.4	1.7	55.0
911				3.4	3.4	3.4	12.0	15.5	10.3	5.2	5.2			6.9	1.7			64.0
942						1.7	6.9	1.7	13.7	3.4	3.4			3.4	1.7		1.7	38.0
973				1.7		1.7		3.4	6.9	6.9	3.4			1.7				26.0
1004					3.4		1.7		3.4						1.7		1.7	12.0
1035								3.4	1.7		1.7							7.0
1066									1.7	1.7	1.7							5.0
Totals	2.0	0.0	5.0	27.0	45.0	88.0	168.0	189.0	168.0	129.0	95.0	52.0	17.0	10.0	5.0	1000.0		

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Crotch Height	760.83	45.51	0.118	7.878	0.086	0.030
Waist Circumference (O)	808.33	88.65	0.118	4.825	0.162	0.057



## Eye Height, Sitting vs. Buttock Knee Length: Males

	673	688	703	718	733	748	763	778	793	808	823	838	853	868	883	Total
Buttock Knee																
506				1.4												1.0
519																0.0
532					1.4		2.7									4.0
545			2.7	4.1	2.7	1.4	4.1	4.1	1.4	1.4						22.0
558	1.4			1.4	2.7	6.8	6.8	9.5	8.1		4.1					41.0
571				2.7	6.8	10.9	13.6	20.3	9.5	9.5	4.1					77.0
584		1.4		2.7	8.2	9.5	21.7	32.5	32.6	20.3	10.8	2.7	1.4			144.0
597				1.4			12.2	31.3	31.3	31.3	19.0	9.5	2.7			155.0
610				1.4	4.1		20.3	25.7	25.8	36.7	16.3	6.8	5.4	2.7	1.4	162.0
623					2.7	8.1	10.9	24.5	29.9	28.5	20.3	14.9	12.2	1.4		154.0
636					2.7	4.1	5.4	10.9	19.0	25.8	20.3	10.9	4.1	2.7	1.4	107.0
649					1.4	5.4	2.7	4.1	5.4	12.2	10.9	12.2	8.2	1.4	1.4	65.0
662								1.4	6.8	2.7	12.2	9.5		2.7	4.1	39.0
675							1.4	5.4	4.1	2.7	4.1	1.4	4.1			23.0
688												1.4	1.4	1.4	1.4	5.0
Totals	1.0	1.0	3.0	15.0	33.0	77.0	102.0	170.0	174.0	171.0	122.0	69.0	39.0	12.0	10.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Buttock Knee Length	614.62	30.23	0.458	4.561	0.478	0.034
Eye Height, Sitting	800.85	33.53	0.458	5.146	0.439	0.031

## Eye Height, Sitting vs. Buttock Knee Length: Females

	645	660	675	690	705	720	735	750	765	780	795	810	825	840	855	Total
Buttock Knee 479						1.7										1.7
493			1.7	1.7												3.4
507		1.7		3.4	3.4		1.7		1.7							11.9
521	1.7			6.9	3.4	6.9	8.6	1.7	1.7							30.9
535		1.7	1.7	10.3	25.8	8.6	12.0	5.2	1.7	1.7						68.7
549			3.4		13.7	49.8	30.9	18.9	8.6	10.3	1.7					137.3
563		1.7	1.7	6.9	13.7	27.5	46.4	24.1	24.1	6.9	3.4			1.7		158.1
591				6.9	13.7	37.8	29.2	22.3	46.4	20.6	8.6	6.9				192.4
605			1.7	1.7	10.3	27.5	15.5	34.4	29.2	24.1	12.0		1.7			158.1
619			3.4	1.7	8.6	6.9	12.0	18.9	20.6	12.0	6.9	5.2	3.4		1.7	101.3
633				3.4		5.2	6.9	13.7	24.1	13.7	10.3	5.2	3.4			85.9
647						1.7	3.4	8.6	1.7	3.4	13.7					32.5
661						1.7		5.2		1.7	1.7					10.3
675				1.7							1.7					3.4
689									1.7					1.7		3.4

Totals

Grand total not 1000 due to rounding

Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Buttock Knee Length	583.30	30.32	0.488	4.146	0.445	0.037
Eye Height, Sitting	750.62	32.31	0.488	3.513	0.535	0.044

Eye Height, Sitting vs. Thumbtip Reach: **Males**

Thumbtip Reach	673	688	703	718	733	748	763	Eye Height, Sitting			808	823	838	853	868	883	Total
								778	793								
662				1.4													1.0
680					1.4												1.0
698				1.4		1.4	1.4										4.0
716			1.4	2.7			5.5	2.7									12.0
734		1.4	1.4	4.1	6.8	9.6	13.7	13.7	15.0	5.5	2.7						74.0
752	1.4			4.1	5.5	16.4	20.5	27.4	13.7	19.2	12.3	1.4		1.4			123.0
770				1.4	5.5	15.0	17.8	39.7	38.3	23.3	12.3	4.1		4.1			161.0
788					6.8	13.7	17.8	38.3	34.2	41.0	15.0	12.3		1.4	2.7		183.0
806					4.1	9.5	10.9	21.9	30.1	36.9	24.6	16.4		6.8	1.4	1.4	164.0
824					1.4	9.5	12.3	16.4	19.2	24.6	24.6	17.8		5.5		2.7	134.0
842						1.4	1.4	6.8	12.3	13.7	21.9	15.0		8.2	5.5		86.0
860					1.4	1.4		1.4	5.5	2.7	5.5	2.7		9.6	2.7	2.7	36.0
878								1.4	1.4	2.7	2.7			1.4		2.7	12.0
896									1.4	1.4	1.4	1.4					4.0
914									2.7								3.0
Totals	1.0	1.0	3.0	15.0	33.0	78.0	101.0	170.0	174.0	171.0	123.0	70.0		38.0	12.0	10.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Eye Height, Sitting	800.85	33.53	0.466	4.931	0.501	0.035
Thumbtip Reach	800.34	37.45	0.466	4.293	0.434	0.031

## Eye Height, Sitting vs. Thumbtip Reach: Females

Thumbtip Reach	645	660	675	690	705	720	735	Eye Height, Sitting		750	765	780	795	810	825	840	855	Total
605						1.7	1.7											3.0
621		1.7	1.7	3.4														7.0
637				1.7	1.7		1.7											5.0
653	1.7	1.7	1.7	3.4	3.4	8.6	5.2											26.0
669			1.7	3.4	20.7	17.2	17.2	1.7				1.7	1.7					66.0
685			1.7	13.8	15.5	25.9	27.6	15.5	13.8			3.4	1.7					119.0
701		1.7	1.7	5.2	17.2	46.6	39.7	34.5	20.7			13.8		3.4				184.0
717				3.4	17.2	29.3	27.6	31	37.9			12.1	3.4					162.0
749			1.7	1.7	10.3	20.7	20.7	25.9	32.8			25.9	10.3	5.2	1.7			157.0
765			1.7	3.4	5.2	13.8	10.3	15.5	24.1			19.0	15.5	3.4	1.7			114.0
781			1.7	3.4		8.6	12.1	12.1	13.8			15.5	12.1		1.7		1.7	83.0
797						3.4	1.7	10.3	8.6				6.9	3.4	1.7	1.7		38.0
813				1.7				5.2	5.2			1.7	5.2	1.7	1.7			24.0
829													1.7					2.0
845								1.7	3.4			1.7	1.7			1.7		10.0
Totals	2.0	5.0	14.0	45.0	91.0	176.0	167.0	153.0	160.0	95.0	60.0	17.0	9.0	3.0	2.0	2.0	1000.0	

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Eye Height, Sitting	750.62	32.31	0.507	3.459	0.521	0.040
Thumbtip Reach	727.42	36.82	0.507	4.011	0.494	0.038

Functional Leg Length vs. Thumbtip Reach: **Males**

Thumbtip Reach	Functional Leg Length														Total
	881	906	931	956	981	1006	1031	1056	1081	1106	1131	1156	1181	1206	1231
662	1.4														1.4
680		1.4													1.4
698				4.1											4.1
716				5.5	2.7	4.1									12.3
734			1.4	2.7	17.7	23.2	16.4	10.9		1.4					73.7
752				2.7	23.3	24.6	49.1	12.3	10.9						122.9
770					4.1	28.6	49.1	40.9	25.9	8.2	4.1				160.9
788					1.4	8.2	43.7	54.6	42.3	23.2	8.2	1.4			183.0
806						1.4	10.9	39.6	47.7	36.8	20.5	6.8			163.7
824							1.4	15.0	39.6	39.6	24.6	12.3	2.7		135.2
842							1.4	1.4	9.5	28.6	24.6	13.6	6.8	1.4	87.3
860								1.4		6.8	12.3	8.2	4.1	2.7	35.5
878										1.4	1.4	5.5	2.7		1.4 12.4
896												2.7	1.4		4.1
914												1.4		1.4	2.8
Totals	1.4	1.4	1.4	15.0	49.2	90.1	172.0	176.1	175.9	146	95.7	51.9	17.7	5.5	1.4 1000.7

Grand total not 1000 due to rounding

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Functional Leg Length	1004.76	52.01	0.788	2.075	0.782	0.023
Thumbtip Reach	800.34	36.82	0.788	1.477	0.793	0.023

## Functional Leg Length vs. Thumbtip Reach: Females

Thumbtip Reach	Functional Leg Length										Total
	819	842	865	888	911	934	957	980	1003	1026	
605	1.7		1.7								3.0
621		1.7	1.7	1.7	1.7						7.0
637			5.2								5.0
653			3.4	1.7	8.6	3.4	6.9	1.7			26.0
669			1.7	5.2	12.0	25.8	15.5	3.4	1.7		66.0
685				3.4	12.0	37.8	37.8	20.6	6.9		119.0
701					10.3	20.6	50.0	50.0	34.5	15.5	184.0
717						12.0	24.1	39.5	51.7	22.4	162.0
749						1.7	13.7	20.6	48.3	34.5	157.0
765							1.7	8.6	31.0	37.9	114.0
781								1.7	17.2	24.1	83.0
797									5.2	3.4	38.0
813										1.7	24.0
829											2.0
845										3.4	10.0
Totals	2.0	2.0	14.0	12.0	45.0	102.0	150.0	147.0	197.0	140.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Functional Leg Length	1004.76	52.01	0.828	1.256	0.933	0.029
Thumbtip Reach	727.42	36.82	0.828	1.495	0.735	0.023

Overhead Fingertip Reach, Sitting vs. Eye Height, Sitting: **Males**

Eye Height	Overhead Fingertip Reach, Sitting															Total
	1164	1195	1226	1257	1288	1319	1350	1381	1412	1443	1474	1505	1536	1567	1598	
673			1.4													1.0
688						1.4										1.0
703					2.7											3.0
718	1.4			1.4	5.5	4.1	2.7									15.0
733					4.1	6.8	9.6	6.8	5.5							33.0
748					2.7	6.8	24.6	23.3	9.6	8.2	2.7					78.0
763					1.4	9.6	32.8	20.5	20.5	13.7	2.7					101.0
778						6.8	23.3	47.9	54.7	30.1	5.5		1.4			170.0
793						4.1	9.6	35.6	39.7	47.9	26.0	8.2	2.7			174.0
808							4.1	23.3	39.7	57.5	32.8	10.9	2.7			171.0
823							2.7	1.4	27.4	28.7	24.6	23.3	12.3	2.7		123.0
838								1.4	4.1	17.8	19.2	15.0	9.6	2.7		70.0
853									4.1	2.7	12.3	10.9	4.1	4.1		38.0
868											1.4	5.5	2.7	2.7		12.0
883												1.4	1.4	4.1	2.7	10.0
Totals	1.0	0.0	1.0	1.0	16.0	40.0	109.0	160.0	205.0	207.0	127.0	75.0	37.0	16.0	3.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Eye Height, Sitting	800.85	33.53	0.718	1.330	0.826	0.030
Overhd Fingertip Rch, S	1437.97	59.28	0.718	3.700	0.624	0.022

Overhead Fingertip Reach, Sitting vs. Eye Height, Sitting: **Females**

Eye Height	Overhead Fingertip Reach, Sitting															Total
	1129	1153	1177	1201	1225	1249	1273	1297	1321	1345	1369	1393	1417	1441	1465	
645			1.7													2.0
660				3.4	1.7											5.0
675			3.4	1.7	3.4		3.4	1.7								14.0
690	1.7	1.7	1.7	3.4	12.1	6.9	6.9	1.7	6.9		1.7					45.0
705			3.4	3.4	20.7	15.5	29.3	13.8	5.2							91.0
720				6.9	13.8	34.5	41.4	41.4	29.3	6.9	1.7					176.0
735		1.7		3.4	10.3	12.1	41.4	44.8	24.1	20.7	5.2	3.4				167.0
750					5.2	1.7	8.6	25.9	44.8	39.7	15.5	6.9	5.2			153.0
765						1.7	5.2	24.1	32.8	56.9	20.7	12.1	3.4	1.7	1.7	160.0
780						1.7	3.4	6.9	12.1	27.6	20.7	17.2	5.2			95.0
795								1.7	1.7	6.9	13.8	15.5	8.6	8.6	3.4	60.0
810										3.4	1.7	8.6	1.7	1.7		17.0
825											1.7		6.9			9.0
840											1.7				1.7	3.0
855													1.7			2.0
Totals	2.0	3.0	10.0	22.0	67.0	74.0	140.0	162.0	157.0	162.0	84.0	64.0	33.0	12.0	7.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Eye Height, Sitting	750.62	32.31	0.734	1.876	0.664	0.025
Overhd Fingertip Rch, S	1323.21	56.83	0.734	2.453	0.811	0.031



Overhead Fingertip Reach, Sitting vs. Functional Leg Length: **Males**

Leg Length	Overhead Fingertip Reach Sitting														Total
	1164	1195	1226	1257	1288	1319	1350	1381	1412	1443	1474	1505	1536	1567	1598
881	1.4														1.0
906					1.4										1.0
931							1.4								1.0
956					6.8	4.1	2.7	1.4							15.0
981				1.4	6.8	8.2	19.1	9.5	4.1						49.0
1006			1.4		1.4	15.0	27.3	28.6	15.0	1.4					90.0
1031						10.9	28.6	53.2	47.7	27.3	4.1				172.0
1056						1.4	21.8	34.1	61.0	38.2	15.0	4.1			176.0
1081							8.2	21.8	36.8	61.4	36.8	8.2	2.7		176.0
1106								9.5	24.6	50.1	40.9	19.1		1.4	146.0
1131								1.4	12.3	16.4	21.8	23.2	16.4	4.1	95.0
1156									5.5	10.9	5.4	15.0	9.5	4.1	52.0
1181											2.7	4.1	5.5	5.5	18.0
1206												1.4	1.4	1.4	5.0
1231													1.4		1.0
Totals	1.0	0.0	1.0	1.0	16.0	40.0	109.0	160.0	207.0	206.0	127.0	75.0	37.0	16.0	3.0 1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Functional Leg Length	1080.60	51.49	0.761	0.928	0.811	0.025
Overhd Fingertip Rch, S	1437.97	59.28	0.761	3.261	0.715	0.022

## Overhead Fingertip Reach, Sitting vs. Functional Leg Length: Females

Leg Length	Overhead Fingertip Reach, Sitting										Total
	1129	1153	1177	1201	1225	1249	1273	1297	1321	1345	
819		1.7									2.0
842	1.7										2.0
865		1.7	6.9		3.4	1.7					14.0
888			1.7	5.2	5.2						12.0
911			1.7	5.2	12.1	8.6	10.3	3.4	3.4		45.0
934				8.6	19.0	15.5	37.9	15.5	3.4	1.7	102.0
957				1.7	17.2	27.6	36.2	39.7	19.0	8.6	150.0
980					8.6	15.5	20.7	36.2	31.0	25.9	147.0
1003				1.7	1.7	3.4	27.6	37.9	44.8	46.6	197.0
1026						1.7	3.4	27.6	32.8	25.9	140.0
1049							3.4	1.7	15.5	32.8	93.0
1072									5.2	15.5	50.0
1095									1.7	5.2	31.0
1118										5.2	9.0
1141										1.7	9.0
Totals	2.0	3.0	10.0	22.0	67.0	74.0	140.0	162.0	157.0	162.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Functional Leg Length	1004.76	52.01	0.771	2.244	0.737	0.025
Overhd Fingertip Rch, Sit	1323.21	56.83	0.771	1.685	0.806	0.028

Shoulder Circumference vs. Stature: **Males**

Stature	1007	1033	1059	1085	1111	1137	1163	1189	1215	1241	1267	1293	1319	1345	1371	Total
1497		1.4														1.0
1528																0.0
1559				4.1	1.4		1.4									7.0
1590	1.4	2.7	1.4	1.4	2.7	2.7	1.4									14.0
1621		2.7	4.1	4.1	2.7	10.8	4.1	4.1	1.4							34.0
1652		2.7	5.4	8.1	12.2	12.2	13.6	6.8	2.7	2.7						66.0
1683	5.4	1.4	6.8	19.0	16.3	16.3	17.6	19.0	10.8	2.7	2.7	2.7	1.4			122.0
1714		1.4	4.1	14.9	20.3	23.0	37.9	21.7	20.3	9.5	9.5		1.4			164.0
1745	1.4	2.7	4.1	12.2	13.6	28.5	46.0	33.9	20.3	10.8	6.8	4.1	2.7	1.4		188.0
1776	1.4	1.4	1.4	9.5	21.7	17.6	23.0	33.9	25.7	14.9	6.8	1.4	1.4	1.4		161.0
1807		1.4	1.4	1.4	2.7	12.2	24.4	12.2	14.9	21.7	10.8	1.4	1.4		1.4	107.0
1838				4.1	4.1	4.1	10.8	10.8	9.5	12.2	6.8	2.7		1.4		66.0
1869		1.4		2.7		4.1	6.8	8.1	8.1	8.1	2.7	1.4	5.4	1.4		50.0
1900							1.4	2.7	1.4	2.7	1.4	4.1				14.0
1931									4.1		1.4					5.0
Totals	9.0	19.0	28.0	81.0	98.0	131.0	188.0	153.0	119.0	85.0	49.0	18.0	14.0	5.0	1.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Shoulder Circumference	1181.53	62.54	0.407	3.219	0.444	0.037
Stature	1760.71	68.66	0.407	6.316	0.373	0.031

## Shoulder Circumference vs. Stature: Females

Stature	862	884	906	928	950	972	994	1016	1038	1060	1082	1104	1126	1148	1170	Total
1428			1.7	1.7	1.7	3.4										9.0
1458	3.4	1.7	1.7	1.7		1.7										10.0
1488			1.7		3.4	3.4		5.2	3.4							17.0
1518		1.7	3.4	8.6	6.9	5.2	12.0	8.6	6.9	3.4	1.7					58.0
1548		1.7	6.9	10.3	20.6	15.5	13.7	17.2	15.5	5.2	5.2					112.0
1578			3.4	6.9	10.3	29.2	39.5	24.1	27.5	20.6	6.9	10.3				179.0
1608			1.7	1.7	13.7	36.1	30.9	27.5	24.1	17.2	5.2	1.7	1.7	1.7		163.0
1638				6.9	1.7	22.3	20.6	17.2	36.1	22.3	17.2	3.4	10.3	1.7	1.7	162.0
1668				3.4	1.7	18.9	18.9	12.0	20.6	15.5	3.4	12.0			1.7	108.0
1698		1.7			3.4	6.9	20.6	22.3	10.3	8.6	3.4	5.2	3.4	1.7		88.0
1728						6.9	6.9	5.2	13.7	6.9	1.7	5.2	6.9		3.4	57.0
1758						3.4	3.4	5.2	3.4	1.7	5.2	1.7		1.7		26.0
1788							1.7		1.7			1.7		1.7	7.0	
1818											1.7		1.7			3.0
1848											1.7					2.0
Totals	3.0	7.0	21.0	41.0	64.0	153.0	168.0	144.0	163.0	101.0	53.0	41.0	24.0	7.0	9.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Shoulder Circumference	1024.95	53.25	0.395	4.355	0.375	0.036
Stature	1632.84	68.60	0.394	4.871	0.415	0.040

## Sitting Height vs. Functional Leg Length: Males

Leg Length	Sitting Height															Total
	810	825	840	855	870	885	900	915	930	945	960	975	990	1005	1020	
881			1.4													1.0
906					1.4											1.0
931								1.4								1.0
956		1.4	4.1	1.4	1.4	2.7	4.1									15.0
981		2.7	1.4	8.2	4.1	9.5	12.2	6.8	1.4	2.7						49.0
1006	2.7	1.4	4.1	8.2	8.2	19.0	23.0	16.3	6.8	1.4						91.0
1031			1.4	8.2	16.3	27.1	37.9	32.5	27.1	14.9	5.4	1.4				173.0
1056		1.4		1.4	17.7	17.7	24.4	33.9	43.5	16.3	13.6	2.7	2.7			175.0
1081			1.4	4.1	12.2	17.7	29.8	27.1	35.2	24.4	17.7	4.1	2.7			177.0
1106			1.4	1.4	5.4	6.8	19.0	35.2	21.7	23.0	23.0	6.8				144.0
1131				2.7	2.7		9.5	13.6	10.9	21.7	16.3	9.5	6.8	1.4		95.0
1156					1.4	2.7	2.7	4.1	5.4	12.2	8.2	9.5	1.4	1.4	4.1	53.0
1181								1.4	2.7	2.7	6.8	2.7	1.4			18.0
1206							1.4		1.4				1.4	1.4		5.0
1231											1.4					1.0
Totals	3.0	7.0	15.0	35.0	71.0	103.0	164.0	173.0	156.0	120.0	92.0	37.0	16.0	4.0	4.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Functional Leg Length	1080.60	51.49	0.516	4.765	0.462	0.028
Sitting Height	923.35	34.61	0.516	3.188	0.577	0.035

## Sitting Height vs. Functional Leg Length: Females

Leg Length	Sitting Height															Total
	754	769	784	799	814	829	844	859	874	889	919	934	949	964	979	
819						1.7										2.0
842			1.7													2.0
865	1.7		1.7	1.7	3.4	3.4	1.7									14.0
888			3.4		3.4		3.4	1.7								12.0
911			1.7	6.9	8.6	12.0	8.6	5.2		1.7						45.0
934		3.4		10.3	15.5	29.2	17.2	17.2	1.7	3.4	3.4					101.0
957			1.7		24.1	37.8	39.5	24.1	12.0	6.9	1.7	1.7				149.0
980				5.2	8.6	20.6	34.4	22.3	27.5	18.9	8.6					146.0
1003			1.7	6.9	10.3	30.9	36.1	29.2	48.1	13.7	13.7	3.4	1.7	1.7		198.0
1026			1.7	5.2	5.2	10.3	12.0	17.2	25.8	34.4	12.0	12.0	1.7	1.7		139.0
1049				1.7	1.7	1.7	8.6	15.5	20.6	18.9	12.0	10.3		1.7		93.0
1072					1.7	5.2	3.4	1.7	6.9	6.9	13.7	8.6	1.7	1.7		52.0
1095				1.7			3.4		8.6	5.2	3.4	5.2	3.4			31.0
1118								1.7	3.4	1.7	1.7					9.0
1141									1.7	1.7	3.4	1.7			1.7	9.0
Totals	2.0	3.0	14.0	40.0	82.0	153.0	168.0	136.0	155.0	113.0	74.0	43.0	9.0	7.0	2.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Functional Leg Length	1004.76	52.01	0.537	4.028	0.590	0.038
Sitting Height	864.55	33.49	0.537	3.550	0.489	0.032

Sleeve Outseam vs. Chest Circumference: **Males**

	481	495	509	523	537	551	565	Sleeve Outseam				607	621	635	649	663	677	Total
Chest Circ						1.4	1.4							1.4				4.0
811																		
842					2.7	2.7	1.4	1.4	1.4									9.0
873	1.4			2.7	2.7	8.1	9.5	6.8	10.8	4.1	1.4	1.4						49.0
904					2.7	8.1	12.2	14.9	10.8	16.3	6.8	6.8	1.4			1.4		81.0
935			1.4		6.8	14.9	23.0	25.7	23.0	9.5	12.2	5.4				1.4		123.0
966				1.4	6.8	14.9	14.9	32.5	32.5	19.0	23.0	12.2	1.4			2.7		161.0
997					4.1	12.2	25.7	32.5	24.4	19.0	14.9	6.8	1.4			2.7	1.4	145.0
1028			1.4	1.4	5.4	8.1	16.3	29.8	39.3	25.7	39.3	10.8	1.4			2.7	1.4	183.0
1059						2.7	5.4	14.9	14.9	21.7	16.3	8.1	8.1				4.1	96.0
1090						2.7	6.8	9.5	8.1	6.8	17.6	5.4	8.1	4.1				69.0
1121						2.7	5.4	6.8	9.5	6.8	8.1	13.6	4.1					57.0
1152						2.7				1.4	2.7	1.4	1.4					9.0
1183							5.4	1.4				1.4						8.0
1214													1.4					1.0
1245												2.7						3.0
Totals	1.0	0.0	3.0	5.0	31.0	81.0	122.0	180.0	176.0	130.0	142.0	77.0	28.0	14.0		8.0		1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Chest Circumference	1011.79	72.26	0.299	4.121	0.321	0.038
Sleeve Outseam	600.22	30.06	0.299	7.077	0.278	0.033

## Sleeve Outseam vs. Chest Circumference: Females

	421	436	451	466	481	496	511	526	541	556	571	586	601	616	631	Total
Chest Circ																
715					1.7											2.0
745				1.7	1.7	1.7	1.7	1.7		1.7						10.0
775				1.7	1.7	1.7	10.3	6.9	1.7	1.7					1.7	27.0
805				3.4	6.9	8.6	15.5	15.5	8.6	8.6	3.4		1.7			72.0
835				5.2	1.7	22.3	12.0	27.5	18.9	13.7	6.9	6.9				115.0
865	1.7			3.4	6.9	24.1	32.6	25.8	30.9	37.8	15.5	8.6				187.0
895					8.6	10.3	30.9	42.9	32.6	36.1	10.3	1.7	6.9			180.0
925				5.2	6.9	8.6	20.6	41.2	34.4	17.2	17.2	6.9	3.4	1.7		163.0
955				1.7		5.2	8.6	30.9	17.2	13.7	12.0	5.2	3.4	1.7	1.7	101.0
985						1.7	15.5	12.0	12.0	12.0	10.3	1.7	1.7			67.0
1015						1.7	6.9	1.7	8.6	10.3	8.6	1.7				40.0
1045								8.6		6.9		1.7	1.7		3.4	22.0
1075							1.7				5.2					7.0
1105									1.7							2.0
1135									1.7	1.7						3.0
Totals	2.0	0.0	0.0	22.0	36.0	86.0	156.0	215.0	168.0	162.0	89.0	34.0	19.0	3.0	7.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Chest Circumference	912.68	66.18	0.263	4.648	0.289	0.044
Sleeve Outseam	540.72	30.12	0.282	7.008	0.220	0.031



Sleeve Outseam vs. Neck Circumference: **Males**

Neck Circ	Sleeve Outseam															Total
	481	495	509	523	537	551	565	579	593	607	621	635	649	663	677	
317					1.4											1.0
327						1.4	1.4	1.4								4.0
337				2.7	2.7		2.7	2.7		2.7		4.1	1.4		1.4	20.0
347					4.1	12.2	10.8	5.4	19.0	4.1	5.4	5.4				66.0
357	1.4		1.4	1.4	1.4	16.3	20.3	25.7	16.3	12.2	10.8	6.8		1.4		115.0
367					13.6	16.3	23.0	40.7	40.7	20.3	25.7	8.1	4.1		1.4	194.0
377			1.4	1.4	2.7	17.6	24.4	39.3	36.6	31.2	31.2	16.3	5.4	5.4	2.7	215.0
387					2.7	8.1	19.0	32.5	33.9	25.7	32.5	12.2	2.7	2.7		172.0
397					1.4	2.7	12.2	13.6	14.9	17.6	17.6	12.2	2.7	1.4	1.4	98.0
407					1.4	2.7	4.1	12.2	8.1	10.8	12.2	1.4	6.8	1.4	1.4	62.0
417						2.7	4.1	4.1	5.4	2.7	4.1	6.8	4.1			34.0
427						1.4			1.4	1.4	2.7	2.7	1.4	1.4		12.0
437								1.4								1.0
447								1.4								1.0
457										1.4		1.4				3.0
Totals	1.0	0.0	3.0	5.0	31.0	81.0	122.0	180.0	176.0	130.0	142.0	77.0	28.0	14.0	8.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Neck Circumference	381.99	19.90	0.240	5.060	0.221	0.033
Sleeve Outseam	600.22	30.06	0.240	7.189	0.261	0.039

**Sleeve Outseam vs. Neck Circumference: Females**

Neck Circ	421	436	451	466	481	496	Sleeve Outseam							631	616	601	586	571	556	541	526	511	506	491	476	461	446	431	416	401	386	371	356	341	326	311	296	281	266	251	236	221	206	191	176	161	146	131	116	101	86	71	56	41	26	11	Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
277					1.7	1.7	1.7				1.7						1.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Neck Circumference	314.85	15.49	0.282	3.817	0.361	0.051
Sleeve Outseam	540.72	30.12	0.282	7.007	0.220	0.031

Stature vs. Chest Circumference: **Males**

	1497	1528	1559	1590	1621	1652	1683	1714	1745	1776	1807	1838	1869	1900	1931	Total
Chest																
Circ				1.4			1.4			1.4						4.2
811																
842					2.7		2.7	2.7		1.4						9.5
873	1.4		1.4	4.1	1.4	9.5	8.1	6.8	4.1	8.1	1.4	1.4	1.4			49.1
904					2.7	6.8	19.0	14.9	17.6	8.1	4.1	6.8	1.4			81.4
935			2.7	2.7	6.8	12.2	20.3	25.7	21.7	13.6	12.2	2.7	2.7			123.3
966			1.4	2.7	8.1	8.1	19.0	29.8	27.1	31.2	17.6	5.4	9.5	1.4		161.3
997			1.4		5.4	12.2	13.6	25.7	40.7	20.3	12.2	6.8	5.4		1.4	145.1
1028				2.7	4.1	14.9	16.3	19.0	40.7	36.6	24.4	12.2	8.1	2.7	1.4	183.1
1059					1.4	1.4	6.8	20.3	14.9	17.6	10.8	10.8	4.1	6.8	1.4	96.3
1090						1.4	4.1	13.6	5.4	13.6	9.5	5.4	12.2	2.7	1.4	69.3
1121					1.4		9.5	4.1	10.8	5.4	13.6	9.5	2.7			57.0
1152							1.4		1.4	4.1		1.4	1.4			9.7
1183								1.4	4.1			2.7				8.2
1214													1.4			1.4
1245											1.4	1.4				2.8
Totals	1.4	0.0	6.9	13.6	34.0	66.5	122.2	164.0	188.5	161.4	107.2	66.5	50.3	13.6	5.6	1001.7

Grand total not 1000 due to rounding

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Chest Circumference	1011.79	72.26	0.319	4.025	0.332	0.036
Stature	1760.71	68.66	0.319	6.869	0.305	0.033

## Stature vs. Chest Circumference: Females

	1428	1458	1488	1518	1548	1578	1608	1638	1668	1698	1728	1758	1788	1818	1848	Total
Chest																
Circ		1.7														2.0
715																
745		3.4			1.7	1.7		1.7		1.7						10.0
775	1.7	1.7		1.7	1.7	8.6	3.4	3.4	1.7	1.7	1.7					27.0
805			3.4	8.6	17.2	10.3	12.0	6.9	5.2	3.4	1.7	1.7	1.7			72.0
835	1.7	1.7	1.7	8.6	24.1	22.3	15.5	13.7	13.7	6.9	3.4	1.7				115.0
865	3.4	1.7	5.2	12.0	22.3	32.6	36.1	17.2	22.3	18.9	12.0	3.4				187.0
895			3.4	10.3	17.2	32.6	42.9	27.5	15.5	18.9	5.2	5.2	1.7			180.0
925	1.7		3.4	5.2	13.7	30.9	25.8	36.1	20.6	12.0	10.3	1.7		1.7		163.0
955				6.9	8.6	18.9	8.6	22.3	6.9	12.0	6.9	8.6		1.7		101.0
985				1.7	5.2	12.0	10.3	12.0	12.0	5.2	5.2	1.7	1.7			67.0
1015				3.4		5.2	1.7	12.0	6.9	5.2	3.4	1.7				40.0
1045						3.4	5.2	6.9	1.7	1.7	1.7		1.7	1.7		22.0
1075							1.7			1.7	3.4					7.0
1105									1.7							2.0
1135								1.7			1.7					3.0
Totals	9.0	10.0	17.0	58.0	112.0	179.0	163.0	162.0	108.0	88.0	57.0	26.0	7.0	3.0	2.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Chest Circumference	912.68	66.18	0.263	5.257	0.253	0.039
Stature	1632.84	68.60	0.263	5.385	0.273	0.042

Waist Back Length (Omphalion) vs. Chest Circumference: **Males**

Chest Circ	Waist Back Length (Omphalion)															Total
	395	407	419	431	443	455	467	479	491	503	515	527	539	551	563	
811					1.4		1.4	1.4								4.0
842					2.7	2.7	2.7	1.4								9.0
873		1.4	1.4	4.1	10.8	9.5	4.1	8.1	2.7	5.4	1.4					49.0
904			2.7	2.7	9.5	19.0	14.9	13.6	6.8	8.1	4.1					81.0
935	1.4		1.4	2.7	9.5	19.0	28.5	23.0	19.0	13.6	5.4					123.0
966	1.4			2.7	13.6	17.6	23.0	29.8	42.0	17.6	9.5	2.7		1.4		161.0
997				6.8	5.4	24.4	27.1	32.5	24.4	13.6	9.5	1.4				145.0
1028				2.7	6.8	19.0	24.4	36.6	33.9	29.8	12.2	12.2	4.1		1.4	183.0
1059					2.7	4.1	10.8	20.3	23	8.1	10.8	10.8	1.4	2.7	1.4	96.0
1090					1.4	6.8		8.1	9.5	16.3	9.5	6.8	4.1	2.7	4.1	69.0
1121						1.4	2.7	4.1	9.5	16.3	5.4	4.1	5.4	5.4	2.7	57.0
1152						1.4		1.4	1.4	2.7	2.7					9.0
1183						1.4	1.4		1.4		1.4	2.7				8.0
1214													1.4			1.0
1245									1.4					1.4		3.0
Totals	3.0	1.0	5.0	22.0	64.0	126.0	141.0	180.0	175.0	131.0	72.0	41.0	16.0	14.0	9.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Chest Circumference	1011.79	72.26	0.445	3.214	0.457	0.034
Waist Back Length (O)	488.35	27.00	0.445	5.278	0.433	0.032

## Waist Back Length (Omphalion) vs. Chest Circumference: Females

Chest Circ	Waist Back Length (Omphalion)															Total
	374	386	398	410	422	434	446	458	470	482	494	506	518	530	542	
715				1.7												2.0
745	1.7				1.7	3.4	3.4									10.0
775	1.7		1.7	5.2	5.2	6.9	3.4	1.7	1.7							27.0
805		3.4	5.2	17.2	6.9	10.3	10.3	8.6	5.2	3.4	1.7					72.0
835		1.7	1.7	12.0	24.1	36.1	22.3	15.5	1.7							115.0
865			1.7	13.7	44.7	37.8	36.1	34.4	12.0	5.2	1.7					187.0
895		1.7	8.6	20.6	34.4	25.8	27.5	25.8	13.7	15.5	5.2	1.7				180.0
925	1.7	3.4	1.7	8.6	22.3	29.2	34.4	27.5	22.3	8.6	1.7			1.7		163.0
955				1.7	12.0	17.2	22.3	15.5	15.5	6.9	10.3					101.0
985				3.4	6.9	6.9	25.8	1.7	13.7		6.9	1.7				67.0
1015						6.9	13.7	5.2	6.9	3.4		1.7	1.7			40.0
1045						3.4	5.2	5.2	3.4	5.2						22.0
1075							1.7	1.7		3.4						7.0
1105												1.7				2.0
1135								1.7					1.7			3.0
Totals	5.0	10.0	21.0	84.0	158.0	184.0	206.0	144.0	96.0	48.0	31.0	7.0	3.0	0.0	2.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Chest Circumference	912.68	66.18	0.359	4.460	0.392	0.042
Waist Back Length (O)	448.47	24.22	0.359	4.420	0.328	0.035

## Weight vs. Stature: Males

	Stature	52.9	57.2	61.5	65.8	70.1	74.4	78.7	83.0	87.3	91.6	95.9	100.2	104.5	108.8	113.1	Total
	1497	1.4															1.0
	1528																0.0
	1559		1.4		4.1		1.4										7.0
	1590	4.1	1.4	1.4	4.1		2.7										14.0
	1621	2.7	1.4	5.4	5.4	10.8	5.4		1.4	1.4							34.0
	1652		1.4	12.2	12.2	13.6	12.2	13.6	1.4								66.0
	1683	2.7	8.1	17.6	16.3	21.7	21.7	6.8	9.5	9.5	4.1	2.7		1.4			122.0
	1714		2.7	12.2	19.0	31.2	28.5	24.4	17.6	19.0	6.8		2.7				164.0
	1745		1.4	6.8	13.6	24.4	37.9	35.2	32.5	14.9	12.2		4.1	4.1	1.4		188.0
	1776		1.4	4.1	14.9	16.3	21.7	19.0	27.1	27.1	14.9	9.5	5.4				161.0
	1807				2.7	5.4	16.3	16.3	16.3	16.3	14.9	9.5	4.1	4.1	1.4		107.0
	1838			1.4	1.4	2.7	4.1	6.8	8.1	12.2	6.8	10.8	8.1		2.7	1.4	66.0
	1869					5.4	1.4	4.1	6.8	6.8	8.1	8.1	2.7	5.4		1.4	50.0
	1900									4.1	4.1	1.4	1.4	1.4	1.4		14.0
	1931								1.4				1.4	2.7			5.0
Totals		11.0	19.0	61.0	93.0	131.0	153.0	126.0	121.0	112.0	72.0	42.0	30.0	19.0	7.0	3.0	1000.0

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Stature	1760.71	68.66	0.562	5.756	0.468	0.025
Weight	80.64	11.53	0.562	0.882	0.674	0.037

## Weight vs. Stature: Females

Stature	38.9	42.8	46.7	50.6	54.5	Weight										93.5	Total
						58.4	62.3	66.2	70.1	74.0	77.9	81.8	85.7	89.6			
1428		1.7	1.7	3.4	1.7										9.0		
1458	5.2		1.7	1.7	1.7										10.0		
1488		1.7	3.4		6.9	3.4	1.7								17.0		
1518		3.4	8.6	8.6	15.5	13.7	5.2		3.4						58.0		
1548		6.9	6.9	29.2	25.8	22.3	13.7	1.7	5.2						112.0		
1578		3.4	5.2	18.9	44.7	36.1	30.9	25.8	10.3	1.7	1.7				179.0		
1608			3.4	17.2	37.8	44.7	22.3	18.9	10.3	3.4	5.2				163.0		
1638		1.7		12.0	13.7	29.2	34.4	25.8	15.5	15.5	10.3	3.4			162.0		
1668				3.4	17.2	24.1	18.9	12.0	10.3	10.3	5.2	5.2	1.7		108.0		
1698				1.7	6.9	12.0	29.2	15.5	13.7	5.2	1.7	1.7			88.0		
1728				3.4		5.2	13.7	5.2	10.3	8.6	1.7	3.4		3.4	57.0		
1758					3.4	3.4	3.4	3.4	5.2	5.2	1.7				26.0		
1788						1.7	1.7					1.7	1.7		7.0		
1818										1.7				1.7	3.0		
1848														1.7	2.0		
Totals	5.0	19.0	31.0	100.0	175.0	196.0	175.0	108.0	84.0	52.0	27.0	15.0	5.0	5.0	2.0	1000.0	

## Bivariate Regression Results

Dependent Variable	Mean	SD	r	Intercept	Slope	SE(est)
Stature	1632.84	68.60	0.527	3.757	0.540	0.036
Weight	62.57	8.79	0.527	2.847	0.513	0.034



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**CHAPTER V**  
**REGRESSION EQUATIONS**

**Regression Results for Crotch Height / Waist Circ. (Natural Indentation)**

Variable	Intercept	$\beta$ Crotch Ht.	$\beta$ Waist C.	r	Adjusted r <sup>2</sup>
<b>Females</b>					
1. Ankle Circumference	119.949 se est 8.379	.045 se est .010	.072 se est .007	.461	.210
2. Buttock Circumference	345.597 se est 32.434	.212 se est .039	.637 se est .026	.737	.542
3. Calf Circumference	180.073 se est 15.287	.059 se est .018	.176 se est .012	.541	.290
4. Crotch Length (OM)	309.853 se est 26.606	.203 se est .032	.207 se est .021	.466	.214
5. Crotch Length, Posterior (OM)	181.271 se est 19.164	.132 se est .023	.040 se est .015	.271	.070
6. Knee Circumference	114.629 se est 14.004	.126 se est .017	.212 se est .011	.671	.450
7. Knee Height Midpatella	9.404 se est 7.084	.549 se est .009	.036 se est .006	.941	.884
8. Thigh Circumference	172.226 se est 25.582	.087 se est .031	.466 se est .021	.700	.489
<b>Males</b>					
1. Ankle Circumference	95.048 se est 8.656	.057 se est .009	.092 se est .005	.565	.317
2. Buttock Circumference	216.480 se est 25.331	.240 se est .027	.667 se est .016	.849	.720
3. Calf Circumference	159.463 se est 15.442	.045 se est .017	.213 se est .010	.637	.405
4. Crotch Length (OM)	226.553 se est 26.534	.181 se est .029	.314 se est .017	.602	.360
5. Crotch Length, Posterior (OM)	141.788 se est 17.575	.137 se est .019	.072 se est .011	.354	.123
6. Knee Circumference	113.695 se est 12.132	.120 se est .013	.203 se est .008	.732	.534
7. Knee Height, Midpatella	7.317 se est 8.209	.539 se est .009	.055 se est .005	.920	.846
8. Thigh Circumference	88.531 se est 23.568	.096 se est .025	.497 se est .015	.782	.611

**Regression Results for Crotch Height / Waist Circ. (Omphalion)**

Variable	Intercept	$\beta$ Crotch Ht.	$\beta$ Waist C.	r	Adjusted $r^2$
<b>Females</b>					
1. Ankle Circumference	126.001 se est 8.244	.045 se est .010	.072 se est .007	.450	.200
2. Buttock Circumference	374.044 se est 30.069	.212 se est .039	.637 se est .026	.768	.589
3. Calf Circumference	197.669 se est 15.286	.059 se est .018	.176 se est .012	.510	.257
4. Crotch Length (OM)	351.830 se est 27.057	.203 se est .032	.207 se est .021	.392	.151
5. Crotch Length, Posterior (OM)	202.720 se est 18.853	.132 se est .023	.040 se est .015	.251	.060
6. Knee Circumference	129.543 se est 13.721	.126 se est .017	.212 se est .011	.669	.446
7. Knee Height, Midpatella	13.005 se est 6.958	.549 se est .009	.036 se est .006	.940	.884
8. Thigh Circumference	196.257 se est 24.260	.087 se est .031	.466 se est .021	.722	.520
<b>Males</b>					
1. Ankle Circumference	105.385 se est 8.309	.053 se est .009	.082 se est .005	.574	.327
2. Buttock Circumference	278.598 se est 21.197	.199 se est .024	.615 se est .012	.889	.790
3. Calf Circumference	184.841 se est 14.850	.035 se est .017	.188 se est .009	.642	.411
4. Crotch Length (OM)	261.974 se est 25.421	.164 se est .028	.280 se est .015	.611	.372
5. Crotch Length, Posterior (OM)	146.617 se est 16.896	.132 se est .019	.069 se est .010	.367	.133
6. Knee Circumference	132.138 se est 11.096	.108 se est .012	.187 se est .006	.764	.583
7. Knee Height, Midpatella	12.385 se est 7.869	.535 se est .008	.051 se est .005	.921	.848
8. Thigh Circumference	133.990 se est 20.760	.065 se est .023	.459 se est .012	.823	.677

**Regression Results for Stature / Chest Circumference**

Variable	Intercept	$\beta$ Stature	$\beta$ Chest C.	r	Adjusted $r^2$
<b>Females</b>					
1. Biceps Circumference, Flexed	83.876 se est 17.046	-.020 se est .010	.253 se est .011	.708	.499
2. Buttock Circumference	119.729 se est 45.385	.192 se est .027	.593 se est .029	.715	.509
3. Interscye II	43.338 se est 20.516	.104 se est .012	.179 se est .013	.615	.376
4. Neck Circumference,Base	127.526 se est 12.779	.054 se est .008	.143 se est .008	.668	.444
5. Shoulder Length	47.573 se est 10.963	.057 se est .007	.002 se est .007	.354	.122
6. Sleeve Outseam	-57.039 se est 17.794	.356 se est .011	.018 se est .011	.823	.675
7. Waist Back Length (OM)	80.425 se est 19.965	.181 se est .012	.079 se est .013	.609	.368
8. Waist Circumference (OM)	-86.094 se est 56.975	-.047 se est .035	1.065 se est .036	.786	.616
<b>Males</b>					
1. Biceps Circumference, Flexed	57.587 se est 17.155	-.001 se est .010	.278 se est .010	.751	.563
2. Buttock Circumference	40.507 se est 33.419	.171 se est .020	.646 se est .019	.833	.692
3. Interscye II	128.822 se est 21.273	.040 se est .012	.207 se est .012	.592	.348
4. Neck Circumference,Base	140.261 se est 15.066	.050 se est .009	.179 se est .008	.682	.463
5. Shoulder Length	65.134 se est 10.317	.047 se est .006	.002 se est .006	.298	.086
6. Sleeve Outseam	-24.010 se est 17.472	.343 se est .010	.019 se est .010	.801	.641
7. Waist Back Length (OM)	32.624 se est 19.786	.195 se est .012	.111 se est .011	.656	.429
8. Waist Circumference (OM)	-200.897 se est 44.526	.046 se est .026	1.004 se est .025	.849	.720

**Regression Results for Waist Back Length (OM) / Chest Circumference**

Variable	Intercept	$\beta$ Waist Bk.	$\beta$ Chest C.	r	Adjusted $r^2$
<b>Females</b>					
1. Buttock Circumference	212.380 se est 36.646	.521 se est .081	.579 se est .030	.711	.504
2. Interscye II	122.768 se est 17.053	.193 se est .037	.183 se est .014	.578	.331
3. Neck Circumference, Base	157.351 se est 10.375	.134 se est .022	.140 se est .008	.658	.432
4. Shoulder Length	89.124 se est 9.103	.114 se est .020	.004 se est .007	.254	.061
5. Sleeve Outseam	292.532 se est 22.891	.425 se est .050	.063 se est .018	.412	.167
6. Waist Circumference (OM)	-471.050 se est 41.993	.971 se est .092	.925 se est .034	.823	.676
7. Waist Front Length (OM)	69.208 se est 12.534	.558 se est .028	.084 se est .010	.736	.541
<b>Males</b>					
1. Buttock Circumference	124.549 se est 24.064	.518 se est .052	.610 se est .020	.837	.701
2. Interscye II	178.889 se est 15.629	.026 se est .034	.215 se est .013	.584	.340
3. Neck Circumference, Base	165.426 se est 10.939	.151 se est .024	.169 se est .009	.685	.469
4. Shoulder Length	106.683 se est 7.701	.086 se est .017	.002 se est .006	.215	.044
5. Sleeve Outseam	333.173 se est 18.856	.444 se est .041	.050 se est .015	.466	.215
6. Waist Circumference (OM)	-374.562 se est 29.856	.765 se est .065	.887 se est .024	.874	.764
7. Waist Front Length (OM)	51.240 se est 11.330	.641 se est .025	.058 se est .009	.775	.599

**Regression Results for Crotch Height / Buttock Circumference**

Variable	Intercept	$\beta$ Crotch Ht.	$\beta$ Buttock C.	r	Adjusted $r^2$
<b>Females</b>					
1. Ankle Circumference	85.770 se est 8.464	.023 se est .009	.106 se est .007	.572	.325
2. Calf Circumference	101.740 se est 14.699	.010 se est .017	.251 se est .012	.673	.450
3. Crotch Length (OM)	152.513 se est 24.354	.108 se est .027	.391 se est .020	.672	.449
4. Crotch Length, Posterior (OM)	86.278 se est 19.247	.077 se est .021	.170 se est .015	.467	.216
5. Knee Circumference	19.610 se est 11.883	.067 se est .013	.303 se est .010	.818	.667
6. Knee Height, Midpatella	5.768 se est 7.824	.546 se est .009	.033 se est .006	.940	.883
7. Thigh Circumference	-61.882 se est 14.481	-.057 se est .016	.704 se est .012	.929	.863
8. Waist Circumference (OM)	902.072 se est 49.025	.978 se est .027	-.432 se est .034	.842	.708
<b>Males</b>					
1. Ankle Circumference	61.128 se est 8.062	.022 se est .009	.143 se est .006	.680	.462
2. Crotch Length, Posterior (OM)	91.511 se est 17.552	.097 se est .019	.146 se est .013	.454	.204
3. Calf Circumference	86.916 se est 13.507	-.033 se est .014	.324 se est .010	.766	.586
4. Crotch Length (OM)	134.330 se est 25.457	.073 se est .027	.457 se est .019	.682	.465
5. Knee Circumference	45.992 se est 9.663	.047 se est .010	.306 se est .007	.856	.732
6. Knee Height, Midpatella	.820 se est 8.663	.525 se est .009	.066 se est .007	.919	.844
7. Thigh Circumference	-76.651 se est 14.115	-.085 se est .015	.750 se est .010	.935	.873
8. Waist Circumference (OM)	865.870 se est 36.815	.774 se est .014	-.337 se est .024	.906	.820

**Regression Results for Sleeve Outseam / Chest Circumference**

Variable	Intercept	$\beta$ Sleeve O.	$\beta$ Chest C.	r	Adjusted $r^2$
<b>Females</b>					
1. Biceps Circumference, Flexed	74.996 se est 13.849	-.045 se est .023	.253 se est .011	.708	.499
2. Buttock Circumference	240.512 se est 37.512	.332 se est .063	.608 se est .029	.703	.492
3. Interscye II	94.087 se est 16.847	.213 se est .029	.183 se est .013	.604	.363
4. Neck Circumference	141.238 se est 9.342	.061 se est .016	.154 se est .007	.700	.488
5. Shoulder Length	90.984 se est 9.244	.083 se est .016	.009 se est .007	.329	.054
6. Waist Back Length (OM)	217.959 se est 18.020	.257 se est .030	.100 se est .014	.472	.220
7. Waist Circumference (OM)	-103.469 se est 46.272	-.111 se est .078	1.065 se est .036	.786	.616
8. Wrist Circumference	65.773 se est 4.597	.079 se est .008	.047 se est .003	.625	.388
<b>Males</b>					
1. Biceps Circumference, Flexed	67.868 se est 14.103	-.025 se est .023	.281 se est .009	.751	.564
2. Buttock Circumference	156.514 se est 28.184	.277 se est .045	.664 se est .019	.823	.677
3. Interscye II	169.928 se est 17.608	.036 se est .028	.215 se est .012	.585	.340
4. Neck Circumference	172.402 se est 11.159	.024 se est .018	.193 se est .007	.712	.506
5. Shoulder Length	89.864 se est 8.579	.093 se est .014	.005 se est .006	.263	.067
6. Waist Back Length (OM)	167.765 se est 17.799	.311 se est .029	.132 se est .012	.565	.318
7. Waist Circumference (OM)	-158.136 se est 36.695	.051 se est .059	1.012 se est .025	.849	.719
8. Wrist Circumference	65.206 se est 5.229	.089 se est .008	.056 se est .003	.643	.412



**Regression Results for Crotch Height / Vertical Trunk Circumference (USA)**

Variable	Intercept	$\beta$ Crotch Ht.	$\beta$ VTC(USA)	r	Adjusted $r^2$
<b>Females</b>					
1. Biceps Circumference, Flexed	30.952 se est 19.937	-.095 se est .020	.208 se est .014	.537	.286
2. Buttock Circumference	-43.446 se est 44.975	-.054 se est .045	.683 se est .031	.707	.498
3. Calf Circumference	70.425 se est 20.474	-.017 se est .020	.191 se est .014	.523	.272
4. Chest Circumference	-28.596 se est 51.657	-.152 se est .052	.681 se est .035	.642	.410
5. Crotch Length (OM)	-24.366 se est 28.328	-.010 se est .028	.418 se est .020	.702	.492
6. Crotch Length, Posterior (OM)	15.929 se est 23.204	.029 se est .023	.176 se est .016	.474	.222
7. Interscye II	75.804 se est 22.207	.094 se est .022	.148 se est .015	.491	.238
8. Knee Circumference	-6.521 se est 19.356	.041 se est .019	.220 se est .013	.632	.397
9. Knee Height, Midpatella	-3.234 se est 9.512	.540 se est .009	.030 se est .007	.939	.881
<b>Males</b>					
1. Biceps Circumference, Flexed	48.440 se est 19.498	-.050 se est .020	.199 se est .011	.563	.315
2. Buttock Circumference	-6.083 se est 33.164	-.070 se est .034	.639 se est .019	.796	.633
3. Calf Circumference	81.231 se est 18.144	-.056 se est .018	.210 se est .010	.611	.372
4. Chest Circumference	.163 se est 43.312	-.185 se est .044	.703 se est .025	.734	.537
5. Crotch Length (OM)	-1.680 se est 25.337	-.042 se est .026	.413 se est .014	.745	.553
6. Crotch Length, Posterior (OM)	45.934 se est 18.729	.059 se est .019	.134 se est .011	.489	.237
7. Interscye II	173.506 se est 21.949	.016 se est .022	.134 se est .013	.401	.159
8. Knee Circumference	27.296 se est 13.770	.016 se est .014	.210 se est .008	.737	.542
9. Knee Height, Midpatella	-17.325 se est 9.350	.510 se est .009	.058 se est .005	.921	.847

**Regression Results for Crotch Height / Vertical Trunk Circumference (USA)**  
**(Continued)**

Variable	Intercept	$\beta$ Crotch Ht.	$\beta$ VTC(USA)	r	Adjusted $r^2$
<b>Females</b>					
10. Neck Circumference, Base	122.778 se est 13.926	.025 se est .014	.131 se est .010	.561	.312
11. Shoulder Length	71.359 se est 10.956	.059 se est .011	.018 se est .007	.299	.086
12. Sleeve Outseam	55.442 se est 15.067	.543 se est .015	.046 se est .010	.871	.757
13. Thigh Circumference	-77.863 se est 36.850	-.087 se est .037	.467 se est .025	.630	.395
14. Waist Back Length (OM)	56.031 se est 18.372	.069 se est .018	.219 se est .013	.667	.443
15. Waist Circumference (OM)	-279.884 se est 73.902	-.267 se est .074	.832 se est .051	.574	.327
16. Waist Front Length (OM)	35.859 se est 16.159	-.012 se est .016	.238 se est .011	.699	.487
17. Wrist Circumference	46.057 se est 5.584	.020 se est .005	.058 se est .003	.618	.379
<b>Males</b>					
10. Neck Circumference, Base	145.107 se est 14.407	-.035 se est .015	.177 se est .008	.637	.405
11. Shoulder Length	91.892 se est 9.417	.070 se est .010	6.415 se est .005	.281	.077
12. Sleeve Outseam	65.861 se est 14.829	.494 se est .015	.074 se est .008	.829	.686
13. Thigh Circumference	-56.635 se est 30.727	-.122 se est .031	.457 se est .017	.703	.493
14. Waist Back Length (OM)	56.369 se est 16.373	.049 se est .017	.236 se est .009	.726	.526
15. Waist Circumference (OM)	-306.218 se est 49.040	-.340 se est .050	.896 se est .028	.768	.588
16. Waist Front Length (OM)	46.167 se est 15.600	-.003 se est .016	.229 se est .009	.714	.509
17. Wrist Circumference	45.577 se est 5.589	.025 se est .006	.066 se est .003	.671	.448

**Regression Results for Stature / Shoulder Circumference**

Variable	Intercept	$\beta$ Should. C.	$\beta$ Stature	r	Adjusted $r^2$
<b>Females</b>					
1. Biceps Circumference, Flexed	25.266 se est 16.349	.357 se est .013	-.067 se est .010	.759	.574
2. Buttock Circumference	4.521 se est 46.527	.791 se est .037	.097 se est .029	.725	.524
3. Chest Circumference	-56.215 se est 40.219	1.063 se est .032	-.074 se est .025	.827	.683
4. Interscye II	-21.829 se est 18.996	.299 se est .015	.056 se est .012	.712	.506
5. Neck Circumference, Base	101.673 se est 13.297	.187 se est .011	.032 se est .008	.667	.444
6. Shoulder Length	24.445 se est 11.125	.048 se est .009	.043 se est .007	.410	.165
7. Sleeve Outseam	-68.079 se est 18.440	.039 se est .015	.348 se est .011	.824	.678
8. Waist Back Length (OM)	81.554 se est 21.129	.073 se est .017	.179 se est .013	.590	.346
9. Waist Circumference (OM)	-196.003 se est 68.591	1.231 se est .054	-.157 se est .042	.698	.486
10. Wrist Circumference	40.007 se est 5.747	.063 se est .005	.028 se est .003	.648	.417
<b>Males</b>					
1. Biceps Circumference, Flexed	-11.077 se est 16.569	.351 se est .011	-.038 se est .010	.787	.618
2. Buttock Circumference	-59.206 se est 39.387	.700 se est .025	.129 se est .023	.775	.600
3. Chest Circumference	-116.083 se est 36.995	1.010 se est .024	-.037 se est .022	.860	.739
4. Interscye II	56.877 se est 19.664	.302 se est .013	-.003 se est .011	.693	.478
5. Neck Circumference, Base	96.782 se est 15.098	.225 se est .010	.027 se est .009	.705	.495
6. Shoulder Length	42.129 se est 10.327	.046 se est .007	.031 se est .006	.380	.142
7. Sleeve Outseam	-30.355 se est 18.032	.027 se est .012	.340 se est .011	.802	.642
8. Waist Back Length (OM)	28.204 se est 21.113	.095 se est .014	.197 se est .012	.627	.391
9. Waist Circumference (OM)	-309.399 se est 59.992	.999 se est .039	.015 se est .035	.725	.524
10. Wrist Circumference	25.532 se est 6.283	.063 se est .004	.043 se est .004	.680	.461

**Regression Results for Sleeve Outseam / Neck Circumference**

Variable	Intercept	$\beta$ Sleeve O.	$\beta$ Neck C.	r	Adjusted $r^2$
<b>Females</b>					
1. Biceps Circumference, Flexed	-1.450 se est 17.812	-.046 se est .026	.977 se est .050	.637	.404
2. Buttock Circumference	105.424 se est 49.509	.361 se est .071	2.140 se est .139	.605	.363
3. Chest Circumference	-68.837 se est 47.461	.146 se est .069	2.867 se est .134	.693	.479
4. Interscye II	46.308 se est 20.754	.218 se est .030	.675 se est .058	.553	.304
5. Shoulder Length	100.175 se est 10.910	.090 se est .016	-.016 se est .031	.235	.052
6. Waist Back Length (NI)	195.954 se est 23.394	.270 se est .034	.103 se est .066	.348	.118
7. Waist Circumference (NI)	-247.580 se est 48.879	.075 se est .071	2.988 se est .138	.691	.476
8. Wrist Circumference	41.063 se est 5.207	.072 se est .008	.226 se est .015	.661	.435
<b>Males</b>					
1. Biceps Circumference, Flexed	-24.526 se est 18.020	.032 se est .025	.897 se est .038	.677	.457
2. Buttock Circumference	-11.639 se est 40.276	.441 se est .056	1.941 se est .084	.706	.497
3. Chest Circumference	-123.050 se est 45.662	.322 se est .063	2.464 se est .095	.723	.522
4. Interscye II	101.837 se est 21.162	.081 se est .029	.676 se est .044	.525	.274
5. Shoulder Length	95.334 se est 9.830	.098 se est .014	-.009 se est .021	.261	.066
6. Waist Back Length (NI)	177.155 se est 18.076	.310 se est .025	.146 se est .038	.467	.216
7. Waist Circumference (NI)	-265.961 se est 47.375	.171 se est .065	2.700 se est .099	.730	.531
8. Wrist Circumference	31.143 se est 5.597	.091 se est .008	.234 se est .012	.698	.486

**Regression Results for Stature / Weight**

Variable	Intercept	$\beta$ Weight	$\beta$ Stature	r	Adjusted $r^2$
<b>Females</b>					
1. Biceps Circumference, Flexed	335.099 se est 11.953	.266 se est .006	-.135 se est .008	.865	.747
2. Buttock Circumference	739.357 se est 27.085	.689 se est .015	-.120 se est .019	.906	.821
3. Calf Circumference	306.417 se est 15.701	.224 se est .008	-.056 se est .011	.761	.578
4. Chest Circumference	827.628 se est 36.171	.711 se est .020	-.220 se est .025	.846	.715
5. Crotch Height	-224.681 se est 20.600	-.031 se est .011	.615 se est .014	.897	.805
6. Crotch Length (OM)	267.023 se est 29.696	.237 se est .016	.123 se est .021	.672	.450
7. Crotch Length, Posterior (OM)	95.162 se est 23.793	.066 se est .013	.107 se est .017	.445	.195
8. Interscye II	197.897 se est 20.775	.141 se est .011	.055 se est .014	.588	.344
9. Knee Circumference	249.713 se est 13.370	.245 se est .007	-.023 se est .009	.847	.717
<b>Males</b>					
1. Biceps Circumference, Flexed	356.425 se est 15.513	.218 se est .006	-.111 se est .010	.816	.664
2. Buttock Circumference	766.161 se est 20.883	.544 se est .008	-.119 se est .013	.942	.887
3. Calf Circumference	364.968 se est 15.082	.207 se est .006	-.085 se est .010	.815	.664
4. Chest Circumference	947.630 se est 31.307	.636 se est .012	-.255 se est .020	.902	.813
5. Crotch Height	-224.219 se est 20.890	-.065 se est .008	.630 se est .013	.884	.782
6. Crotch Length (OM)	328.366 se est 30.737	.234 se est .012	.075 se est .020	.702	.491
7. Crotch Length, Posterior (OM)	107.337 se est 21.551	.056 se est .008	.094 se est .014	.469	.218
8. Interscye II	327.512 se est 22.726	.135 se est .009	-.015 se est .015	.551	.302
9. Knee Circumference	256.262 se est 11.684	.173 se est .005	-.003 se est .007	.863	.745

**Regression Results for Stature / Weight (Continued)**

Variable	Intercept	$\beta$ Weight	$\beta$ Stature	r	Adjusted $r^2$
<b>Females</b>					
10. Knee Height, Midpatella	-102.122 se est 13.821	.010 se est .007	.337 se est .010	.868	.753
11. Neck Circumference, Base	256.515 se est 12.483	.124 se est .007	.007 se est .009	.677	.456
12. Shoulder Length	49.364 se est 10.825	.001 se est .006	.057 se est .007	.354	.122
13. Sleeve Outseam	-43.131 se est 17.590	.011 se set .010	.353 se est .012	.822	.675
14. Thigh Circmference	528.576 se est 20.389	.538 se est .011	-.174 se est .014	.905	.818
15. Waist Back Length (OM)	156.882 se est 19.482	.079 se est .011	.148 se est .013	.621	.383
16. Waist Circumference (OM)	902.072 se est 49.025	.978 se est .027	-.432 se est .034	.842	.708
17. Waist Front Length (OM)	163.600 se est 18.152	.090 se est .010	.108 se est .013	.604	.363
<b>Males</b>					
10. Knee Height, Midpatella	-96.913 se est 13.534	.001 se est .005	.340 se est .009	.867	.752
11. Neck Circumference, Base	332.187 se est 14.589	.140 se est .006	-.020 se est .009	.727	.529
12. Shoulder Length	66.063 se est 10.648	8.744 se est .004	.048 se est .007	.298	.086
13. Sleeve Outseam	-8.871 se est 18.056	.009 se est .007	.342 se est .012	.801	.640
14. Thigh Circmference	584.748 se est 19.335	.444 se est .007	-.194 se est .013	.919	.845
15. Waist Back Length (OM)	159.670 se est 19.728	.096 se est .008	.143 se est .013	.685	.467
16. Waist Circumference (OM)	865.870 se est 36.815	.774 se est .014	-.337 se est .024	.906	.820
17. Waist Front Length (OM)	155.620 se est 19.034	.099 se est .007	.106 se est .012	.660	.434

**Regression Results for Buttock-Knee Length / Eye Height, Sitting**

Variable	Intercept	$\beta$ Eye Ht.	$\beta$ Buttock-K.	r	Adjusted $r^2$
<b>Females</b>					
1. Abdominal Extension Depth, Sit	91.387 se est 24.954	-.192 se est .035	.479 se est .037	.475	.223
2. Elbow Rest Height	21.690 se est 17.270	.524 se est .024	-.314 se est .025	.675	.454
3. Functional Leg Length	-10.913 se est 20.018	.198 se est .028	1.487 se est .028	.930	.864
4. Overhead Fingertip Reach, Sitting	100.277 se est 29.848	.924 se est .041	.908 se est .044	.864	.747
<b>Males</b>					
1. Abdominal Extension Depth, Sit	39.988 se est 26.457	-.064 se est .034	.424 se est .038	.399	.157
2. Elbow Rest Height	-4.065 se est 17.631	.545 se est .023	-.313 se est .025	.661	.436
3. Functional Leg Length	40.933 se est 18.553	.150 se est .024	1.496 se est .027	.927	.860
4. Overhead Fingertip Reach, Sitting	126.967 se est 29.521	.885 se est .038	.979 se est .042	.857	.733

### Regression Results for Functional Leg Length / Overhead Fingertip Reach, Sitting

Variable	Intercept	$\beta$ Overhead	$\beta$ Functional	r	Adjusted $r^2$
<b>Females</b>					
1. Buttock-Knee, Length	41.326 se est 11.304	.002 se est .014	.537 se est .015	.924	.853
2. Eye Height, Sitting	191.074 se est 20.490	.503 se est .025	-.105 se est .027	.758	.573
3. Sitting Height	276.201 se est 20.994	.509 se est .026	-.084 se est .028	.764	.583
4. Thumbtip Reach	41.540 se est 18.752	.213 se est .023	.403 se est .025	.852	.725
<b>Males</b>					
1. Buttock-Knee, Length	20.314 se est 10.479	.018 se est .011	.526 se est .013	.924	.854
2. Eye Height, Sitting	215.278 se est 20.392	.488 se est .022	-.108 se est .025	.742	.549
3. Sitting Height	310.326 se est 20.771	.505 se est .023	-.105 se est .026	.750	.562
4. Thumbtip Reach	62.183 se est 18.690	.226 se est .021	.382 se est .024	.835	.696



**Regression Results for Functional Leg Length / Sitting Height**

Variable	Intercept	$\beta$ Sitting Ht.	$\beta$ Functional	r	Adjusted $r^2$
<b>Females</b>					
1. Buttock-Knee, Length	57.440 se est 12.831	-.029 se est .017	.548 se est .011	.924	.853
2. Eye Height, Sitting	-62.090 se est 7.642	.949 se est .010	-.008 se est .007	.977	.954
3. Overhead Fingertip Reach, Sitting	53.302 se est 29.841	.795 se est .040	.580 se est .040	.880	.774
4. Thumbtip Reach	95.820 se est 22.702	.085 se est .031	.556 se est .020	.830	.688
<b>Males</b>					
1. Buttock-Knee, Length	30.079 se est 11.985	-.001 se est .015	.542 se est .010	.923	.852
2. Eye Height, Sitting	-73.240 se est 7.384	.946 se est .009	3.578 se est .006	.977	.954
2. Overhead Fingertip Reach, Sitting	32.947 se est 29.771	.795 se est .036	.621 se est .024	.875	.765
4. Thumbtip Reach	114.374 se est 22.783	.098 se est .027	.550 se est .019	.809	.654

### Regression Results for Eye Height, Sitting / Overhead Fingertip Reach, Sitting

Variable	Intercept	$\beta$ Overhead	$\beta$ Eye Ht.	r	Adjusted $r^2$
<b>Females</b>					
1. Buttock-Popliteal Length	54.525 se est 19.436	.427 se est .021	-.190 se est .037	.730	.532
2. Functional Leg Length	93.737 se est 32.757	.822 se est .035	-.236 se est .062	.794	.629
3. Knee Height Sitting	23.180 se est 16.719	.454 se est .018	-.151 se est .031	.811	.657
4. Sitting Height	92.720 se est 7.311	.036 se est .008	.965 se est .014	.977	.955
<b>Males</b>					
1. Buttock-Popliteal Length	59.742 se est 18.110	.387 se est .017	-.148 se est .031	.720	.518
2. Functional Leg Length	150.918 se est 30.549	.767 se est .029	-.217 se est .052	.785	.616
3. Knee Height Sitting	50.174 se est 16.096	.394 se est .015	-.074 se est .027	.790	.623
4. Sitting Height	102.246 se est 6.955	.033 se est .007	.966 se est .012	.978	.956

**Regression Results for Thumbtip Reach / Eye Height, Sitting**

Variable	Intercept	$\beta$ Eye Ht.	$\beta$ Thumbtip	r	Adjusted $r^2$
<b>Females</b>					
1. Buttock-Knee, Length	73.767 se est 19.909	.106 se est .028	.591 se est .025	.779	.606
2. Functional Leg Length	42.078 se est 29.629	.256 se est .042	1.059 se est .037	.839	.704
3. Knee Height Sitting	-4.843 se est 14.872	.122 se est .021	.583 se est .018	.857	.734
4. Overhead Fingertip Reach, Sitting	77.629 se est 27.742	.856 se est .039	.829 se est .034	.885	.782
<b>Males</b>					
1. Buttock-Knee, Length	67.894 se est 19.037	.125 se est .024	.558 se est .022	.767	.587
2. Functional Leg Length	81.802 se est 29.106	.243 se est .037	1.005 se est .033	.817	.667
3. Knee Height Sitting	7.453 se est 14.690	.152 se est .019	.535 se est .017	.837	.700
4. Overhead Fingertip Reach, Sitting	77.558 se est 28.164	.841 se est .036	.858 se est .032	.875	.765

**Regression Results for Thumbtip Reach / Functional Leg Length**

Variable	Intercept	$\beta$ Functional	$\beta$ Thumbtip	r	Adjusted r <sup>2</sup>
<b>Females</b>					
1. Buttock-Knee, Length	39.099 se est 9.900	.525 se est .017	.022 se est .023	.924	.853
2. Eye Height, Sitting	400.046 se est 23.229	.238 se est .039	.154 se est .055	.537	.286
3. Overhead Fingertip Reach, Sitting	245.920 se est 32.057	1.162 se est .054	.877 se est .076	.921	.848
4. Sitting Height	487.824 se est 23.688	.262 se est .040	.155 se est .056	.557	.309
<b>Males</b>					
1. Buttock-Knee, Length	23.725 se est 9.556	.525 se est .014	.029 se est .019	.924	.854
2. Eye Height, Sitting	413.439 se est 23.664	.226 se est .035	.179 se est .048	.522	.270
3. Overhead Fingertip Reach, Sitting	234.639 se est 32.146	1.207 se est .047	.867 se est .064	.918	.843
4. Sitting Height	516.978 se est 24.274	.246 se est .036	.175 se est .049	.531	.280

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